JOINT FORWARD OPERATING BASE ELEMENTS OF COMMAND AND CONTROL

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ABSTRACT

JOINT FORWARD OPERATING BASE ELEMENTS OF COMMAND AND CONTROL, by MAJ William C. Summers, 94 pages.

Since the 1986 Goldwater-Nichols Act directed the Chairman of the Joint Chiefs of Staff to develop doctrine for the joint employment of the armed forces, tactics, techniques, and procedures have evolved at different rates depending on the competency. Whereas the command of joint air forces is well prescribed within the structure of the air operations center and its associated leadership, command of air assets at a joint forward operating base lacks guidance.

Today, the United States prosecutes an air war over Afghanistan from bases in Uzbekistan, Pakistan, and Afghanistan. Elements of the United States Army, Air Force, and Marines combine at these geographically minute locations, each bringing a certain complement of support and command and control. Evidence from operations during the 1999 air war for Kosovo at Tirana Rinas Airport in Albania suggests that when these service elements meet at the airfield for the first time, there are problems associated with local procedure. At best, time is wasted creating local joint systems to overcome the difficulties. At worst, safety and mission accomplishment are jeopardized.

This thesis will address the need to develop doctrine and a jointly integrated organization to support the command and control function at a forward operating base.

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To the men and women of the 86th Contingency Response Group who led the way during the North Atlantic Treaty Organizations war for Kosovo. Days after their inception, they ran the busiest forward operating base in the theater and highlighted the need to further study the United States air component's ability to operate forward.

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ACRONYMS

ACA	Airspace Control Authority
ACC	Air Combat Command
ACO	Airspace Coordination Order
AFDD	Air Force Doctrine Document
AOC	Air Operations Center
AOR	Area of Responsibility
APOD	Aerial Port of Debarkation
ATC	Air Traffic Control
ATO	Air Tasking Order
ATS	Air Traffic Service
BOS	Battlefield Operating System
C2	Command and Control
C4	Command, Control, Communications, and Computers
CA	Civil Affairs
CCS	Combat Communications Squadron
CJSC	Chairman of the Joint Chiefs of Staff
CONOPS	Concept of Operations
CRG	Contingency Response Group
CRU	Contingency Response Unit
CS	Combat Support
CSS	Combat Service Support
DIRMOBFOR	Director of Mobility Forces

DoD	Department of Defense
FAA	Federal Aviation Administration
FARP	Forward Air Refueling Point
FM	Field Manual or Frequency Modulated
FOB	Forward-Operating Base
GAMSS	Global Air Mobility Support System
HATR	Hazardous Air Traffic Report
ISB	Intermediate Staging Base
J1	Personnel
J2	Intelligence
J3	Operations
J4	Logistics
J5	Plans and Programs
J6	Communications and Computers
JATC	Joint Air Traffic Control
JCAT	Joint Contingency Airfield Team
JCSE	Joint Communications Support Element
JFACC	Joint Forces Air Component Commander
JFLCC	Joint Force Land Component Commander
JCCC	Joint Communications Control Center
JFC	Joint Forces Commander
JP	Joint Publication
JRA	Joint Rear Area

JTF	Joint Task Force
MAGTF	Marine Air-Ground Task Force
MCWP	Marine Corps Warfighting Publication
MCDP	Marine Corps Doctrinal Publication
MHE	Materials Handling Equipment
NATO	North Atlantic Treaty Organization
NGO	Nongovernmental Organizations
NEO	Noncombatant Evacuation Operation
SOCEUR	Special Operations Command Europe
SOF	Special Operations Forces
SOP	Standard Operating Procedures
STS	Special Tactics Squadron
STT	Special Tactics Team
TALCE	Tanker Airlift Control Element
TF	Task Force
TRANSCOM	Transportation Command
TTPs	Tactics, Techniques, and Procedures
US	United States
USA	United States Army
USAF	United States Air Force
USAFE	United States Air Force Europe
USAREUR	United States Army Europe

USMC	United States Marine Corps
USN	United States Navy

CHAPTER 1

INTRODUCTION TO JOINT FORWARD OPERATING BASE ELEMENTS OF COMMAND AND CONTROL

Establishing the Need

In today's war against terrorism, United States (US) conventional and special operations forces (SOF) transformed airfields in Uzbekistan, Pakistan, and Afghanistan (all within US Central Command's area of responsibility [AOR]) into joint forward-operating bases (FOB). The US not only transported large amounts of personnel and equipment into these unprecedented locations but performed war-fighting missions from their surface. General Tommy R. Franks, the US Central Command commander, believes the FOBs are critical to "apply pressure," thus tightening the noose on the US enemy in Afghanistan and suggests that more airfields of this nature are under consideration in the AOR (US DoD News Transcript 2001). Time and again, US forces show a need to rapidly move anywhere in the world and to set up flying operations in areas such as Afghanistan, Mozambique, Somalia, Liberia, the Philippines, Central America, Bosnia, and Albania. In many of these locations, airfields are at a premium; few are up to the standard of allowing robust military night and all-weather operations.

The capability to rapidly develop and integrate a joint team at any airfield in the world within hours is critical for US forces to succeed in future support operations, stability operations, small-scale contingencies, or major theater wars. Worldwide intertheater mobility counts on main, intermediate, and forward bases at which fixed-wing and rotary-wing joint and multinational aircraft can through-put and off-load

personnel and cargo and simultaneously operate in support of, or beyond, the forward line of troops.

Concentration on the Forward Operating Base

The FOB is loosely defined in the *Joint Doctrine Encyclopedia* as:

> An airfield used to support tactical operations without establishing full support facilities. The base may be used for an extended time period. Support by a main operating base will be required to provide backup support for a forward operating base. (1997, 300)

The joint definition considers other characteristics, such as the importance of consolidating logistics at an FOB and the advantages of operating close air support from a forward location, but does not detail the intricacies of actual execution (*Joint Doctrine Encyclopedia* 1997, 300). In today's environment more than close air support can occur from an FOB (most FOB operations will, by nature, become air mobility operations in order to bring in initial and sustainment forces and equipment); joint and multinational partners will need to share both ground facilities and airspace. Furthermore, in a survey of both joint and service doctrine, little is written on FOB operations other than to validate the need and to explain the difficulty in their establishment. Without the capability to off-load troops and equipment at the final destination in a smooth and rapid manner, it does not matter how capable the airlift fleet and remaining infrastructure (Leonard 2000, 1).

This thesis will focus on command and control (C2) operations at FOBs under the assumption that they present the most potential challenge. Typically, main and intermediate staging bases are established outside of combat areas within the existing transportation systems of friendly nations and may need less development in times of

crisis. Conversely, FOBs can be established from limited infrastructure and resources. They are normally either inside combat areas or very close to the front. They may initially lack approach systems, base security, or even a suitable runway.

Primary Question of the Thesis

The US military has a history of conducting multispectrum joint operations from FOBs; most service publications are full of tactics, techniques, and procedures (TTPs) detailing single-service agency responsibilities for the command, control, communications, and computers (C4) of their possessed service components. The primary question becomes, however, with the need for rapid worldwide mobility and specific joint expertise in both conventional and special forces, Can any one service organization execute C4 of either or both joint and multination assets at a bare base in a hostile environment while possessing these capabilities: (1) the ability to rapidly deploy forward and immediately establish safe and effective operations, (2) the ability to safely perform joint air traffic control (ATC) for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support?

Existing Doctrine and TTPs

This thesis will assess existing doctrine, TTPs, and organizations in order to validate or refute the need for new or additional joint FOB C4 procedures and teams.

Current State of Affairs in Joint Doctrine. At present, each service and nation is responsible for its own C4 procedures, organizations, and equipment when operating from FOBs. In order to provide C4 capability, each service has different levels of doctrine, TTPs, and organizational responsibilities. There are many liaison personnel and organizations that help coordinate across the joint spectrum (i.e., Tactical Air Control Parties which include Air Liaison Officers, Theater Airlift Liaison Officers, and Enlisted Tactical Air Controllers; Battlefield Coordination Detachment; Naval and Amphibious Liaison Element, and others); however, in the FOB microcosm there are no standard joint TTPs or an organization (or group of organizations) that routinely trains for complete joint FOB C4 operations. While Joint Publication 3-17, *Joint Tactics, Techniques, and Procedures for Theater Airlift Operations*, assigns the USAF the responsibility of providing airlift and the accompanying en route C4 structure to all US services working within the appropriate request system, it states from the beginning that the C4 guidelines it presents are broad and generic. In fact, most joint doctrine concerning C4 of air assets focus on two categories: intertheater and intratheater mobility and terminal guidance of airborne shooters. The most enlightened effort in joint FOB C2 operations is a joint TTP manual for ATC (*Joint Air Traffic Control* [JATC], *Multiservice Procedures for Joint Air Traffic Control*). However (its title being somewhat misleading), the TTPs manual merely provides detailed single-service capabilities and planning details for the purpose of determining which service can or should be used in specific situations. The JATC TTPs manual does not prescribe or define how to integrate service organizations into a JATC team other than to suggest liaison officer are employed (JATC 1999). This leaves service publications and local base flying regulations.

Service Doctrine. Though many service publications prescribe TTPs for working with joint partners in a generic sense, there is only a small amount written on joint FOB integration. Furthermore, the fact that these TTPs are not written in joint publications is an inherent problem--the US Air Force (USAF) is not responsible under US Army (USA) or US Marine Corps (USMC) doctrine and vice versa. As a result of the lack of higher guidance, flying operations procedures at an airfield are left to the lowest level.

Base Flying Regulations. Each permanent military airfield publishes a base flying regulation to establish local flying procedures. These regulations are specific to each airfield's traffic patterns and permanently assigned aircraft. Thus, depending on the aircraft assigned to a base, integration of rotary-wing and fixed-wing aircraft can be established locally. According to the former Special Tactics Squadron (STS) operations office, Major Brett Nelson, who possesses experience as both an air traffic controller and a SOF combat controller, there is no doctrinal requirement to publish a local flying regulation for a nonpermanent FOB (Nelson 2001). Thus, the lack of a requirement or any overarching guidance in producing a local flying regulation for FOBs renders standardization improbable.

Base Organizations

There are numerous organizations possessing partial competencies for FOB operations. The USA dedicates large units, such as the 82nd Airborne Division, for the task of seizing an airfield (Joint Publication 3-33 1999, V-4). The USMC can also conduct over-the-shore airfield seizure (Joint Publication 3-33 1999, II-5). SOF Special Tactics Teams (STT) can operate small-scale austere airfields in support of their fixed-wing and rotary-wing aircraft (Special Operations Command Center for Plans,

Operations, and Training 1998, 5-47). The USAF maintains numerous organizations to accomplish all facets of airfield operations from C2 to ATC to aircraft on-loading and off-loading. None of these organizations is now capable of complete airfield support, C4, defense, and sustainment in the joint FOB environment. At best, they are brought together in crises without a great deal of prior joint training to rapidly perform as an integrated team without overlap or interference. More realistically, these service units use the first critical hours of a contingency operation to negotiate responsibilities, determine local procedures, and work out an airbase chain of command and communications network.

Categories of Evaluation

In assessing joint C4 procedures and a team's necessity, five categories will be considered: (1) the ability to rapidly deploy forward and immediately establish safe and effective operations, (2) the ability to safely perform JATC for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support. Additional aspects of FOB joint competency cannot be contemplated within the confines of this thesis in order to focus on C4.

A Rapidly Deployable Team

Seizing the Initiative. The first category concentrates on the need for rapid mobility. At the conclusion of hostilities during Operation Allied Force in Serbia, Russian forces seized the initiative--with a few hundred troops and several helicopters,

they secured the airfield at Pristina leaving the North Atlantic Treaty Organization (NATO) peacekeeping forces within Kosovo without an FOB under their control. A US Air Forces Europe (USAFE) organization specializing in airfield operations, the Contingency Response Group (CRG) led by Colonel Cliff Bray had volunteered to secure Pristina Airfield and could have arrived before the Russians. The lesson learned is a paradigm shift according to Colonel Bray, "The old saying the 'firstest' with the 'mostest' does not hold entirely true anymore. The 'mostest' part is irrelevant compared to the 'firstest' aspect" (Bray 2000, 52). Colonel Bray caveats this concept by describing in depth what the "firstest" team must be capable of upon arrival.

Light, Lean, and Lethal. In order to optimize often scarce airlift mobility assets and because aircraft ramp space can be limited at an FOB, any team deploying to and operating from the same location should consolidate manpower and infrastructure. The USAFE CRG cross-trained their force to perform many different competencies, cutting 75 percent of what a normal FOB personnel structure might need to operate and still be safe and effective. The result inspired a motto: "Light, Lean, and Lethal" (Bray 2000, 2). Eliminating cost through dual functionality within manpower may be the biggest motivation for a joint FOB C4 team. Furthermore, saving space by not having to provide life support to additional manpower can be critical during FOB operations, especially during humanitarian operations when the storage space required to store supplies and medical facilities can grow to be extreme.

Air Traffic Control Procedures and Equipment

The single most important function and second aspect this thesis will contemplate with regards to a forward C2 airfield team is the ability to safely provide ATC--the terminal flow of aircraft into and out of the operation.

Providing Volume as Well as Safety. The volume of takeoffs and landings is significantly increased, especially in adverse weather and at night, with effective ATC. At Rinas Airfield, Albania, during Task Forces (TF) Shining Hope and Hawk, there were over 10,000 air movements by over forty different nations, to include US Navy (USN) helicopters working from the USS *Inchon* performing humanitarian assistance and USA combat helicopters accomplishing night-training sorties. Rinas Airfield, as well as the entire country of Albania, had extremely limited ATC capability (radar, navigational aids, trained controllers, etc.) to handle the influx of air movement. Both personnel and ATC equipment had to be deployed to the field to accomplish the mission safely.

The Magnitude of Responsibility. After the initial days of Operation Shining Hope (Shining Hope did not become a TF until NATO took charge two weeks into the mission) and TF Hawk proved overwhelming for the Albanians, a USAF judge advocate authored a memorandum of understanding between the Albanian government and the CRG, naming the CRG's commander the "Federal Aviation Administration (FAA) director" for all of Albania (Bray 2000, 27). Although the CRG has ATC competency within their grasp through a tiered system, they have no inherent expertise within their organization. The newly named FAA director was directly reliant on personnel he does not have the responsibility to train or equip.

Joint ATC Competency. Although air traffic controllers are trained in both rotary-wing and fixed-wing procedures, very few are experienced in performing both, especially when they are combined at the same field (Nelson 2001). The root of this problem is systemic throughout the entire US military spectrum, even within the SOF. Other than local airfield base flying regulations, there are no universal standard operating procedures (SOP) that cover rotary-wing and fixed-wing integration for use at FOBs. Furthermore, certain commanders separate rotary-wing and fixed-wing traffic rather than attempting to sequence it into the same location. Without a waiver, the United States Army Europe does not allow rotary-wing aircraft to fly in the traffic pattern at night while fixed-wing aircraft are airborne in the same pattern (Army Publications and Printing Command 1997, section 9.2). No one in the US European Command is training for integration due to a perceived insurmountable safety threat in peacetime operations. This is alarming in light of several hazardous air traffic reports written during TF Hawk; one such occurred when a USAF C-17 cargo aircraft nearly collided with an USA Blackhawk over the runway at night at Rinas Airfield (Ott 1999, 2). Thorough procedural knowledge and experience of both rotary-wing and fixed-wing traffic operations are key to the safe execution at any FOB.

Needed ATC Equipment. Since many FOB locations do not have robust approach navigation, radar, or lighting systems, any FOB team should be able to rapidly secure those systems if they are not already possessed. USAF Combat Communications Squadrons (CCS) own deployable airfield navigational equipment as well as the competency to set up and operate that equipment upon arrival at an austere location (this

includes ATC personnel). The CCS, through either direct assignment or tiered attachment, could provide equipment and controllers to a permanent FOB C4 team.

Local Command, Control, Communications, and Computers

In preparing the ground-based C4 for FOB operations, preplanning is crucial to establishing a successful system that thrives both initially and in its more-developed stages. Specifically, the commander of the FOB must be able to control all elements in the immediate airfield area in order to insure safe and effective operations. If the commander's span or methods of control are weak or unclear, the rapidly changing airfield environment will suffer. This is especially true in a joint or multinational environment.

Mayoral Duties. There must be a clear chain of command in control of the small amount of land surrounding a runway--especially upon arrival into the area. In some ways, the airbase commander acts as a small town mayor distributing parcels of land to each operating contingent, enforcing town rules, and deciding disputes between actors.

Synchronization of Standards. Often times, different countries and even different US service components play by different rules when it comes to such criterion as placement of structures near the runway; this can create safety hazards. Additionally, when performing specific functions, such as off-loading aircraft in the most rapid manner, certain procedures need to be understood by both off-loading personnel and the visiting aircrew. If these procedures are compromised, off-loading is delayed and can be dangerous. Furthermore, in coordinating critical assets, such as base defense, base logistics, and public affairs, there must be a single, clear plan; this is more easily

accomplished by a single staff with one chain of command. They will be able to more effectively communicate and enforce policy to all participants.

Reach Back Command, Control, Communications, and Computers

There were over 100,000 radio and telephone calls made from the CRG communications center at Rinas Airfield (Bray 2000, 39). When joint and multinational players come together at one location to perform multiple tasks, there will be many home station taskmasters asking questions or directing operations. The ability to effectively communicate with rear echelon C2 organizations in a frequency limited environment is somewhat difficult, especially without prior planning.

The Ability to Communicate to the Rear Area. At Rinas Airfield, the CRG used over ten different forms of reach back communications. Yet since other organizations were not as well equipped, the CRG systems were saturated to the point of failure on several occasions (Bray 2000, 39). According to Joint Publication 3.0, *Doctrine for Joint Operations*, in designating the command of a unified component, two factors are considered: the service commander should have "the preponderance of forces and the requisite command and control capabilities" (Joint Publication 3.0 1995, GL-8). In planning for FOB operations, both communications equipment and frequency allocation must be well thought-out. FOB forces will have to be well equipped to communicate with the hierarchy of C4 agencies through both joint and multinational channels.

Harmonizing the Chiefs. Furthermore, coordinating the directions of multiple taskmasters can be difficult causing conflict at a forward location. During the initial buildup of Tuzla Airbase in Bosnia for TF Eagle, civilian contactors, USAF Red Horse

engineers, and USN construction battalions and their equipment were not properly sequenced into the field. This oversight resulted in the TF diverting or postponing the arrival of scheduled personnel due to a lack of base infrastructure (Center for Army Lessons Learned, Combined Arms Assessment Team, 1996, 5). Similarly, at Rinas Airfield, many inbound scheduling conflicts perpetrated by military and civilian agencies from around the world resulted in fully loaded aircraft circling the skies for hours before they were allowed to land. In some cases, aircraft had to divert to other locations due to fuel considerations and the overcrowded ramps at the field. This all occurred during a critical period when intratheater airlift was attempting to close the movement of TF Hawk to Albania. Eventually, the CRG was able to affect the scheduling policies of multiple countries and nongovernmental organizations (NGO) to facilitate a single and deconflicted plan (Bray 2000, 14).

Host and Multination Coordination

The fifth and final category in which to place FOB C4 competencies is host and multination coordination--the ability of a US component to live within the standards (or coordinate otherwise) set forth by its host and to integrate operations with all worldwide players.

The Importance of Diplomacy. During Operation Fiery Vigil, an evacuation and humanitarian relief operation in the Philippines after the eruption of Mountain Pinatubo, an adversarial relationship formed between the commander, USN Philippines, and a local town mayor. Rear Admiral Mercer and Mayor Gordon denied several mutual requests until the escalation of the denials caused interference with the overall operation. At Subic Base, where US Marines were capable of conducting much needed humanitarian

aid to the adjoining town, the mayor refused the offer forcing the Marines to transport food to other locations for distribution (Siegel 1995, 81). In another example, one of the reasons the CRG found itself in Albania during TF Shining Hope was a lack of agreement between NATO and the Macedonian government to use a closer location in their country--Skopje Airfield. If Albania had also refused airfield usage or become disenchanted during the operations at Tirana, it would have forced the US and their partners to base farther from the refugees and the front line (Bray 2000, 29).

Use the Experts. In order to gather local intelligence and prevent conflict with civilians, all members of an FOB team--particularly the command structure--must respect the customs of the host nation. Often the most effective method of gaining an indigenous population's support is by employing the expertise possessed by a USA or USMC civil affairs (CA) team. During TF Eagle, CA teams targeted local leaders in order to gain their trust. Once a leader's trust was secured, the sentiment filtered to lower echelons and TF Eagle soldiers could more easily work among the population enforcing a zone of separation. CA experts showed the rest of the TF how to gain the trust and thus cooperation of the local people (Center for Army Lessons Learned, Combined Arms Assessment Team, 1996, 137).

Items for Further Study

There are several components critical to FOB operations that this thesis will not contemplate to provide the proper focus on C4. Airbase defense, medical support, public affairs operations, and airbase logistics are primary among the many omitted competencies.

A Quick Look at the Importance of Air Base Defense. Rinas Airfield was sixty miles from the Kosovo border, a thirty-minute flight by Serbian attack helicopters (Bray 2000, 4). The need for force and airfield protection was dire. Security was further complicated by the fact that many host nation and NGO aircraft and ground vehicles needed access to the airfield in order to carry out humanitarian aid. The combined airbase team, mostly consisting of TF Hawk and the CRG, had an intricate plan to provide twenty-four-hour access and protection of not only the physical perimeter of the airfield, but the airspace above it and the approach and departure corridors into the field.

Certainly, the level of security depends on the situation. It may be unrealistic to develop an FOB team that is capable of airbase defense in the most dire threat arena. However, the C2 organization in charge of FOB operations must have a thorough understanding and an organic competency for airbase defense at a prescribed level. The exact level of threat a FOB team can counter needs to be studied further.

How to Handle Media Frenzy. The humanitarian operation ongoing at Rinas Airfield was a significant media event, as are most humanitarian missions. Reporters from every major news agency transited the field, broadcasting hundreds of stories. In one way or another, the CRG interfaced with each and every media team whether it was simply setting them up with lodging or giving prime-time interviews. The CRG commander had special training from a public affairs team and eventually had a full-time staff at the field to handle the press. Handling the media is a critical task that cannot be ignored or dealt with curtly. Any military team finding itself in the limelight will need not only public affairs training, but also possibly even a staff to coordinate media events. Doctrine, TTPs, and training for the competencies not discussed under the C4 umbrella

must accompany C4 doctrine, TTPs, and training if a joint C4 team is to be fully successful.

Possible Outcomes

By studying existing doctrine, TTPs, and organizations, as well as lessons learned, this thesis will present a compendium of joint FOB C2 operations. This thesis recognizes that successful joint FOB operations have occurred in the past. However, despite past success, it is possible the DoD is not ideally prepared to operate forward at austere airfields. It may be that the development of joint doctrine to prescribe an exact course is the only necessary adjustment. It may be that regardless of joint doctrine and TTPs, certain service organizations responsible for FOB operations need to train together, forming a habitual relationship in order to better operate during contingencies. It may be that an organization, such as the USAFE CRG or the SOF STT, after growing into a more experienced, better equipped, more robust, or possibly even joint organization supported by new doctrine and TTPs, can provide the solution for both conventional and SOF joint FOB environments.

CHAPTER 2

LITERATURE REVIEW

Introduction

Since the issue was recognized during the Gulf War, military analysis continues to investigate the integration of joint air assets into the air tasking order (ATO). During Operation Allied Force, leaders endeavored to include USN and USA air component liaison elements within the combined Air Operations Center (AOC) in Vincenza, Italy (then location of ATO production). The debate continued, however, over whether USA aviation belongs inside the ATO or whether the Joint Forces Air Component Commander (JFACC) should ever be granted operational or tactical control of USA aviation (Van Deusen 2000, 50-53). In short, as the ATO and its associated products--the airspace coordination order (ACO) and the special instructions--are the JFACC's primary C4 documents from which to plan and execute an air war, commitment from all air components operating within a theater's area of operation is paramount. Many USA commanders have since directed their aviation unit's training to include exercises under an AOC structure. In Europe, the US Army Europe V Corps focuses an entire yearly exercise, named Victory Strike, toward that end. With considerable help from both USAFE and continental United States based air forces, V Corp's attack aviation is deployed and employed focusing on integration into an ATO and delegating control to the USAF JFACC. Though joint doctrine advocates all air assets be included in the ATO process and USA operational level doctrine prescribes their inclusion under certain circumstances, USA tactical level doctrine in the form of TTPs has yet to reflect the change (Van Deusen 2000, 44, 63). With the recent leadership's direction in joint air

exercises, specifically integrating USA aviation under the control of the JFACC, perhaps TTPs will follow.

The almost ten-year progression of mind-set about the USA aviation's role serves as an example of what may need to occur in the C2 of joint forces at an FOB. This chapter will review joint and service doctrine in order to analyze its advocacy, allowance, or negation of a single C4 team running joint air operations forward. Further, this chapter will survey the current competencies possessed by two organizations capable of partial FOB operations, the USAFE CRG and a SOF STT, in order to form a dividing line between SF and conventional joint operations. Finally, it will examine lessons learned from past FOB operations.

Joint Publications

> I am unaware of any substantial joint or service doctrine for forward base operations. There should be a TTP published that clarifies many of the issues that are involved with service or joint operations at a forward base. (Bray 2001)

Colonel Bray, the commander of the CRG during Operation Shining Hope, is correct in his estimate that both joint and service doctrine lack joint FOB TTPs. When joint C2 FOB doctrine is present, as in *JATC, Multiservice* Procedures *for Joint Air Traffic Control*, it usually prescribes that a single-service organization leads the effort while other services attach liaison teams for coordination. There are, however, many general principles and specific TTPs meant for other operations that apply to all joint organizations. An examination of the joint publications (JPs) reveals both pertinent general information and a lack of specific details concerning joint FOB operations.

Eleven Joint Publications. Joint doctrine should serve as the basis for service doctrine and TTPs. In order to do this, it must remain vague enough to allow force employment flexibility. There are eleven JPs and one JATC that this thesis will consider as they pertain to FOB C2 teams:

1. JP 3-0, *Doctrine for Joint Operations* (1995)
2. JP 3-10, *Joint Doctrine for Rear Area Operations* (1996)
3. JP 3-17, *Joint Tactics Techniques, and Procedures for Theater Airlift Operations* (1995)
4. JP 3-52, *Doctrine for Joint Airspace Control in a Combat Zone* (1995)
5. JP 3-56.1, *Command and Control for Joint Air Operations* (1994)
6. JP 4-01.1, *Joint Tactics, Techniques, and Procedures for Airlift Support to Joint Operations* (1996)
7. JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control* (1996)
8. JP 4-01.4, *Joint Tactics, Techniques, and Procedures for Joint Theater Distribution* (2000)
9. JP 4-01.8, *Joint Tactics, Techniques, and Procedures for Reception, Staging, Onward Movement, and Integration* (2000)
10. JP 5-00.2, Joint *Task Force Planning Guidance and Procedures* (1999)
11. JP 6-02, *Joint Doctrine for Employment of Operational/Tactical Command, Control, Communications, and Computer Systems* (1996)
12. JATC, *Multiservice Procedures for Joint Air Traffic Control* (1999)

Joint Publication 3-0, *Doctrine for Joint Operations*. JP 3-0 sets the foundation of joint operations, specifically C2, by discussing the necessity of placing forces under the operational or tactical control of a joint commander to synergize effects and conserve resources. Furthermore, JP 3-0 bestows importance on the ability of forces to "be

positioned within operational reach of enemy centers of gravity to achieve decisive force at the appropriate location," thereby advocating a need for forward presence (JP 3-0 2001, IV-3).

Joint Publication 3-10, *Joint Doctrine for Rear Area Operations*. FOBs can be located within a joint rear area (JRA). JP 3-10 stipulates authority and procedure for JRA operations to include land management, C4 infrastructure, and coordination with host nations. The Joint Forces Commander (JFC) retains all authority for decision making within the JRA; however, he should designate a JRA coordinator to coordinate the security and intelligence plans for the entire JRA. The JRA coordinator will coordinate with the service component commanders to accomplish this task. Furthermore, the JRA coordinator designates a JRA communications officer to coordinate the C4 infrastructure needed to supply redundant communications for all services within the JRA. The JRA communications officer is a coordinator of C4 systems integration, frequency management, and host nation tie-in (JP 3-10, 1996, II-14). JP 3-10 does not specifically address FOB procedures; however, it prescribes integration of all service components under the coordinating eye of a single staff.

JP 3-17, *Joint Tactics, Techniques, and Procedures for Theater Airlift Operations*. FOBs, by nature, begin by air transporting troops, equipment, and supplies to the location. Furthermore, airlift will conveniently continue to resupply troops provided the airfield threat level allows. The C4 systems used to enable each type of mobility aircraft throughout theater and worldwide operations are well explained in JP 3-17. Additionally, this JTTP clearly defines methods of off load, selection criteria for acceptable airfields, C2 organizations within the theater and the continental US, liaison elements between

services, and request procedures. Any joint FOB C2 team must be well educated on the nuances of mobility C4 systems and airlift operations.

JP 3-52, *Doctrine for Joint Airspace Control in a Combat Zone*. JP 3-52 expresses fundamental considerations in controlling aircraft within a combat zone which apply directly to airspace control at an FOB:

1. The need for each service or functional component within the joint force to operate a variety of air vehicles and weapon systems, both high and low speed, rotary-wing and fixed-wing (manned and unmanned), within the airspace

2. The need for each service to use the airspace with maximum freedom consistent with the degree of risk operationally acceptable to the JFC

3. The need for airspace control activities to be performed in congruence with air defense operations to integrate and synchronize surface-to-air defense weapons and air defense aircraft for maximum effectiveness

4. The need for the combat zone airspace control system to be responsive to the requirements of the joint force. The airspace control system needs to be capable of supporting high-density traffic and surge operations as may be required by the JFC

5. The need for close coordination and integration of surface force operations, supporting fires, air operations, air defense operations, special operations, and airspace control activities

6. The need to accommodate US, host nation, and multinational airspace control activities within the joint combat zone

7. Recognition of the saturation levels and limitations of airspace control networks

8. The need to ensure that the airspace control network remains survivable and effective

9. The need to standardize communications data, format, and language requirements in multinational operations to reduce the possibility for differences in interpretation, translation, and application of airspace control procedures during multinational operations

10. The capability to support day or night and all-weather operations (Joint Publication 3-52, 1999, I-3)

In addition to the fundamental considerations, JP 3-52 presents eleven basic principles of airspace control:

1. Unity of effort
2. Reduce the risk of fratricide and balance those risks with the requirements for an effective air defense
3. Close liaison and coordination among all airspace users
4. Common combat zone airspace control procedures
5. Procedural control needs to be uncomplicated.
6. A reliable, jam-resistant, and, where appropriate, secure C4 network
7. Durable and redundant systems
8. Responsive to evolving enemy threat conditions and to the evolving operation
9. Service component air traffic controller training needs to be augmented by combat-specific air traffic control training.
10. Flexibility and simplicity must be emphasized.
11. Capable of supporting day or night and all-weather operations (JP 3-52 1999, I-4)

These considerations and principles form the foundation of ATC at the FOB. While there are numerous airspace controls measures in place within the service doctrine, joint doctrine does not address TTPs for ATC at an airfield traffic area. Nor does it address combining rotary-wing and fixed-wing operations at an airfield. These TTPs are left to service component doctrine or local base procedures, leaving joint integration lacking.

JP 3-56.1, *Command and Control for Joint Air Operations*. JP3-56.1 explains the organization of an AOC, specifically enumerating liaison elements, the targeting process, and JFACC staff requirements. JP 3-56.1 begins with a thorough explanation of a primary tenant of airpower: centralized control, decentralized execution. When the JFC designates a JFACC to create a cohesive joint air operations plan, centralized control is fulfilled. The JFACC further builds a responsive and integrated C4 system allowing decentralized execution to occur when all layers are able to receive the plan, make inputs in a timely manner, and then report back in near real time (JP 3-56.1 1994, I-2). Any joint FOB C2 team should operate under the Airspace Control Authority (ACA) branch of the JFACC's structure.

JP 4-01.1, *Joint Tactics, Techniques, and Procedures for Airlift Support to Joint Operations;* JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control;* JP 4-01.4, *Joint Tactics, Techniques, and Procedures for Joint Theater Distribution;* and JP 4-01.8, *Joint Tactics, Techniques, and Procedures for Reception, Staging, Onward Movement, and Integration*. The JP 4-01 series prescribes general and specific level TTPs on the military's transportation system to include continental US based management, theater management, asset prioritization, and key players within the system. JP 4-01.8 defines the USAF C2 organization responsible for aerial port of debarkation (APOD) operations: the Tanker Airlift Control Element (TALCE). It also differentiates between a TALCE and a potential joint C2 FOB team--the TALCE is not typically used to provide C2 for assets other than AF transportation aircraft. They have little competency in working with fighter or rotary-wing aircraft. TALCEs can be task-organized to employ a myriad of competencies to include security teams, maintenance,

logistics, base infrastructure, and robust C4. However, they do not have habitual relationships with all supporting efforts or joint organizations. In joint USAF and USA operations, a TALCE will work alongside an Arrival/Departure Airfield Control Group, the USA's organization designated for airfield on load and off load support. The JP 4-01 series does not specifically address FOB operations as part of the transportation system; however, any FOB C2 team is bound by the doctrine established within the JP 4-01 series.

JP 5-00.2, *Joint Task Force Planning Guidance and Procedures*. JP 5-00.2 provides detailed guidance for the formulation and execution of a JTF, specifically addressing tactical C4 systems, C2 structure, intelligence, logistics, personnel, and multinational considerations; it includes functional area checklists covering all areas. A JTF is normally a bigger organization than an FOB C2 team, performing a more robust hierarchical function. However, the detailed doctrine in JP 5.00-2 can serve as a baseline for all other joint teams, especially in the formulation of C4 systems.

JP 6-02, *Joint Doctrine for Employment of Operational/Tactical Command, Control, Communications, and Computer Systems.* JP 6-02 explains the C2 structure for a theater's C4 system. The JFC's J6 staff is responsible for fulfilling all functions concerning C4 and will establish a Joint Communications Control Center (JCCC). In turn, the JCCC is responsible for managing all communications systems deployed during operations and exercises and accomplishes this by working with each service and component C4 manager. JP 6-02 states, "C4 planning take(s) place in unison with the activation and subsequent phases of joint task force operations" (JP 6-02 1996, viii). JP 6-02 also includes detailed descriptions of C4 systems available to each JTF and explains

how each should best be deployed and employed for rapid availability and suitability for various situations.

JATC, *Multiservice Procedures for Joint Air Traffic Control*. This manual provides detailed information regarding individual service ATC competency (training, equipment, etc.) and is organized by service component. The manual does not, however, suggest that a joint team performs ATC. Nor are "multiservice procedures" established for local airfield traffic patterns. Rather, after defining what each service ATC organization is capable of performing, it advises which service should lead in differing environments and operational phases. In order to insure each service's aircraft are integrated into local air traffic patterns (whether FOB or other), the manual recommends liaison teams be attached to the lead ATC organization, either locally or by representation at the JFACC's ACA at the joint AOC.

The strength of this document stems from the information it captures in a single reference--service component training, manpower, capability, equipment, and procedures. However, unlike its title suggests, it does not prescribe TTPs for the joint integration of either ATC personnel or the air assets they control.

Joint Publication Summary

Although joint publications set limited TTPs for joint FOB operations, they are directive in the planning and execution of joint teams in general. Therefore, any joint team created, whether ad hoc or with forethought, for the purpose of FOB C2 operations is guided by the principles within joint doctrine. Furthermore, as joint doctrine addresses joint airfield operations--specifically at an APOD--and FOB operations by nature exist in

a more challenging environment, it is deficient that FOB operations are not covered within the joint publications.

USAF Doctrine

> I don't think they [the Army] should be in charge of running an airfield unless it is totally an Army operation [rotary wing]. If fighters are involved, airlift, special ops fixed wing, or reconnaissance I recommend it be a USAF operation with USAF security force in charge of air base defense. (Bray 2001)

Colonel Bray's words stem from an awareness of the USAF's exclusive focus on and organizational belief in airpower as a separate entity. Thus, USAF commanders and their support organizations become obvious candidates for FOB operations involving fixed-wing aircraft. USAF doctrine and TTPs are written to guide the commander and focus the airman's attention on the primary tenants of aerospace power:

1. Centralized Control, Decentralized Execution
2. Flexibility and versatility
3. Synergistic Effects
4. Persistence
5. Concentration
6. Priority
7. Balance (AFDD 1 1997, 22)

In considering FOB operations, USAF doctrine does not offer FOB TTPs focused on integrating with joint partners. It does, however, address operating from austere locations, C4 systems, C2 structure, and the two air mobility support organizations responsible for forward operations: the TALCE and the STT. USAF doctrine is more

specific than joint doctrine in applying detail to the austere airfield environment. There are six AFDDs sourced for the purposes of this thesis:

1. AFDD 2-1.7, *Airspace Control in a Combat Zone*
2. AFDD 2-4.4, *Bases, Infrastructure, and Facilities*
3. AFDD 2-6, *Air Mobility Operations*
4. AFDD 2-6.1, *Airlift Operations*
5. AFDD 2-6.3, *Air Mobility Support*
6. AFDD 2-8, *Command and Control*

AFDD 2-1.7, *Air Space Control*. AFDD 2-1.7, being vertically nested with JP 3-52, *Doctrine for Joint Airspace Control in as Combat Zone*, professes the same doctrine and TTPs. However, it expands by including ATC procedures and more specifically for the purposes of this thesis, ATC at austere locations. The primary organization, according to AFDD 2-1.7, responsible for C2 at an austere location is the SOF STT which employs with the capability to perform: assault-zone assessment, establishment, and control of airfields; combat search and rescue; trauma medical treatment; SOF terminal attack control; and tactical weather observations and forecasting. Their capabilities also include a visual control tower, navigational aids, and a precision-landing system (i.e., the Mobile Microwave Landing System) (AFDD 2-1.7 1998, 46).

AFDD 2-4.4, *Bases, Infrastructure, and Facilities*. AFDD 2-4.4 recommends USAF FOB development is accomplished in a phased deployment of three distinct forces: the advanced echelon, the initial force, and the follow-on force. It describes the advanced force as being, "independent and multi-disciplined with both operational and

support personnel represented" (AFDD 2-4.4 1999, 32). It further lists the competencies required for successful initiation of a bare base facility:

> A combat control element; an engineer site survey team; a services team; and a public health team with equipment and vehicles; mobile communications with weather element; and materiel maintenance, medical, and aeromedical evacuation (AE) personnel as required. Security force elements with vehicles will also be included. If the initial analysis of the situation indicates local liaison, services, and supplies will be required to establish the base, then legal and contracting personnel should be included on the ADVON team. (AFDD 2-4.4 1999, 32-33)

Following the advanced force, the initial force will consist of the first aircraft squadron conducting limited operations, maintenance, and support functions; mobility tools such as materials handling equipment (MHE); and spares kits. The follow-on force will complete the force bringing additional aircraft squadrons and an upgraded maintenance capability. Other support functions, such as security forces, health services support, supply, vehicle maintenance, communications, civil engineering, contracting, and financial services, expand as airlift permits to give the base a full operational capability (AFDD 2-4.4 1999, 33).

Finally, AFDD 2-4.4 suggests that the development of a bare base is done in two distinct phases: the erection and construction phase and the operation and maintenance phase. The primary difference between the two phases is the number of personnel required to accomplish each. No matter the eventual size of the bare base, there will be a robust number of engineering personnel to develop the necessary runway, taxiways, ramp, and structures during the erection and construction phase. During the operation and maintenance phase, the number of personnel is dictated by the mission being performed (AFDD 2-4.4 1999, 33-34).

AFDD 2-6, *Air Mobility Operations*. AFDD 2-6 provides a general picture of the C2 structure used by the USAF for mobility operations and defines the Global Air Mobility Support System (GAMSS): "This system consists of an existing but limited set of permanent CONUS and en route locations. Deployable forces capable of augmenting the fixed en route locations or establishing en route locations where none exist are also an integral part of this system" (AFDD 2-6 1999, 57).

Within the GAMSS, AFDD 2-6 defines ground support agencies and specifically addresses the TALCE and its capabilities. Any FOB C2 team will work as part of GAMSS and therefore be required to fit within the doctrine and TTPs within AFDD 2-6.

AFDD 2-6.1, *Airlift Operations*. AFDD 2-6.1 addresses, more specifically than its parent publication, the airlift request system, C2 of airlift assets in a theater environment, and airlift airfield suitability. Airfield suitability is the first vital concern of any joint FOB C2 team, and the TTPs within AFDD 2-6.1 standardize and complete an airfield survey process. AFDD 2-6.1 uses Operation Shining Hope at Rinas Airport as an example of an advanced team facing challenges at an airfield.

AFDD 2-6.3, *Air Mobility Support*. AFDD 2-6.3 is a detailed document relating all elements of the GAMSS and how each is structured and integrated within the system to operate in garrison and around the world in deployed locations. The air mobility ground support assets bound by the doctrine within AFDD 2-6.3 currently fulfill FOB C2 operations for mobility assets; however, they are not organized to provide the same services to attack or joint aircraft.

AFDD 2-8, *Command and Control*. AFDD 2-8 outlines the three characteristics of C4 systems: interoperability, sustainability, and survivability. Interoperability is a

system's ability to share information and still protect classified information. It is important to be able to cooperate with coalition players without compromising information meant only for US or NATO partners (AFDD 2-8 2001, 19). Sustainability pertains to a C4 system's maintainability, redundancy, cost effectiveness, and management. Commanders are faced with decisions to use civilian systems, buy off-the-shelf technology, allocate the limited frequency spectrum to the right players, and integrate with host-nation systems (AFDD 2-8 2001, 21). Finally, survivability not only means taking care of delicate electronic equipment, but keeping the information on that equipment safe from intrusion or collection. Again, redundancy is a positive step, but it costs more to protect multiple systems.

USAF Doctrine Summary

USAF doctrine is, as expected, well ahead of joint and other service doctrine in TTPs for C2 of air mobility assets and for how FOBs fit into the hierarchical JFACC system. However, it still lacks specific TTPs for joint FOB operations.

USA Doctrine

USA field manuals (FM) are detailed publications providing specifics, in the form of TTPs and doctrine, to their forces for aviation operations. However, within the detail, there is little allowance for USA aviation support elements becoming part of a joint support force. The FMs prescribe TTPs under the assumption that their aviation assets will receive C2, logistics, primary security, and ATC from their inherent support elements and rarely from joint or other service agencies. Granted, it is easier to plan for total support and subsequently subtract elements as others provide them. Furthermore, as

there are currently no joint teams organized to operate at FOBs, commanders tend to rely on known quantities--the troops they routinely train with or command. Therefore in the case of FOB operations, USA doctrine presents that which it has historically accomplished. To do otherwise, may be too optimistic until joint doctrine and organization are realized.

For the purpose of this thesis, five USA FMs consider FOB C4 operations:

1. FM 1-100, *Army Aviation Operations*

2. FM 1-111, *Aviation Brigades*

3. FM 1-120, Army Air Traffic Services Contingency and Combat Zone Operations

4. FM 1-300, Flight Operations Procedures

5. FM 100-103, Army Airspace Command and Control in a Combat Zone

FM 1-100, *Army Aviation Operations*. FM 1-100 is an overarching manual defining, in general terms, the systems required to complete the aviation battlefield operating system (BOS). It begins by defining the Army's aviation operational principles. This set of beliefs explains how and why USA aviation will be used. It also rationalizes why USA aviation and all its supporting elements will more often than not belong to the USA ground commander and not be controlled by a joint commander:

1. Aviation operates in the ground regime.

2. Aviation expands the battlefield in space and time at each echelon.

3. Aviation performs combat, combat support (CS), and combat service support (CSS) battlefield functions

4. Aviation is concentrated at division and corps level.

5. Aviation units are integrated into the combined arms team down to the level at which they will be employed.

6. Planning times for aviation and ground maneuver elements will be the same (FM 1-100 1997, 1-5).

The principles explain that USA aviation shall be aligned with the supported ground combat units, providing flexibility, agility, and mass. While the FM allows that USA aviation shall be capable of operating within a joint or coalition environment, it does not provide the TTPs to accomplish this task at an FOB. FM 1-100 introduces components, such as ATC, C2, and logistics, but leaves the details to the subordinate manuals.

FM 1-111, *Aviation Brigades*. FM 1-111 dedicates an entire chapter to joint operations, and being vertically nested with JP 3-56.1, *Command and Control for Joint Air Operations*, details the key players and procedures within the joint air campaign process. Within the joint chapter, the manual provides detail on what the USA can provide to the joint fight. Specific to this thesis, FM 1-111 lists the USA's airfield components that can provide support to other services and coalition partners (i.e., ATC, weather services, communications support, security, chemical support, etc.). However, the component descriptions simply list system's capabilities--they do not provide TTPs for joint integration.

FM 1-120, *Army Air Traffic Services (ATS) Contingency and Combat Zone Operations*

> Future ATS deployments will require extensive integration and coordination with joint, combined, and interagency forces. Differences in equipment, procedures, doctrine, and capabilities characterize these deployments. ATS personnel must train to support Army Aviation in this environment. (FM 1-120 1995, 1-7)

Although recognition of the joint, combined, and interagency "integration and coordination" dilemma is a start, the solution, in the form of TTPs, is not present within this FM. FM 1-120 provides USA-focused doctrine and TTPs for ATC during contingency operations. A joint FOB C2 team will need to be familiar with the TTPs within FM 1-120 in order to provide ATC to USA aviation. The same joint FOB C2 team will need to be capable of reconciling the TTPs within the FM with other joint and coalition procedures in order to provide efficient and safe ATC.

FM 1-300, *Flight Operations Procedures*. FM 1-300 is USA doctrine for the airfield management of any airfield. The USAF has similar TTPs in the form of USAF Instructions. While both provide details on organization, systems, and airfield reporting procedures, they both fall under the auspices of FAA guidelines for flight operations. The only reference to "joint" within FM 1-300 is used in defining a "joint-use airfield." By USA doctrine, a joint-use airfield is defined as an airfield, which is shared between the USA and civil aviation.

FM 100-103, *Army Airspace Command and Control in a Combat Zone*. Initially, the most-striking characteristic of this FM is its date of publication: 1987. Fifteen years (pre-Desert Storm) is a long time in the technologically advanced world of C4, especially as the USA has completely recreated its doctrine since that time--this FM still relates to

the *Airland Battle*. Although not everything has changed in the last fifteen years, this FM is out of date and not vertically nested with joint publications. The rewriting of this FM presents the opportunity to provide TTPs on a joint FOB C2 team.

USA Doctrine Summary

While Army doctrine provides explicit direction for aviation C2, base support, and operations, it provides little detail for joint support operations at an FOB. Furthermore, the doctrine does not encourage USA aviation to work under a JTF as a maneuver force apart from the USA's ground combat forces. Without a change to these two fundamentals, USA aviation support elements will be hard pressed to mix with other assets at an FOB.

USMC Doctrine

True to their expeditionary nature, the USMC provides detailed information on littoral FOB operations. Billed as a force capable of conducting littoral land and air operations from the sea, the USMC imparts doctrine and TTPs aimed directly at accomplishing maneuver in conjunction with (and apart from as a separate force) the USN. This is not to say that the USMC does not recognize the value of a joint team outside of the USN. It dedicates several pages, and even chapters, stating just so. However, as their USA and USAF partners do, the USMC prints only C2 FOB TTPs for their forces.

This thesis studies five Marine Corps war-fighting publications (MCWP) and Marine Corps doctrinal publications (MCDP):

1. MCDP 3, *Expeditionary Operations*

2. MCDP 6, *Command and Control*

3. MCWP 3-2, *Aviation Operations*

4. MCWP 3-21.1, *Aviation Ground Support*

5. MCWP 3-25-8, *Marine Air Traffic Control Detachment Handbook*

MCDP 3, *Expeditionary Operations*. MCDP 3 presents the philosophy and organization of the USMC. The USMC expeditionary philosophy, as it applies to FOB operations, is best summed up in the statement: "Expeditionary operations involve the establishment of forward bases, land or sea, from which military power can be brought to bear on the situation. An expeditionary operation thus requires the temporary creation of a support apparatus necessary to sustain the operation to its conclusion" (MCDP 3 1998, 32).

Additional USMC philosophy pertinent to FOB operations defines expeditionary operations as *austere* in nature, therefore limiting infrastructure and emphasizing force protection and intelligence (MCDP 3 1998, 35). Furthermore, the expeditionary force possesses a *bags packed* mentality, meaning that all personnel and equipment are ready to deploy in a moment's notice (MCDP 3 1998, 43-44). Finally, the USMC recognizes that the value of strategic mobility stems not only from the ability to get to a location fast, but to get there with all the operational components necessary to conduct a mission. MCDP calls this concept *closure rate*, and states, "the ability to close quickly is extremely important, especially in the early stages of a developing situation" (MCDP 3 1998, 46).

MCDP 3 continues by arraying the basic organization of USMC forces: the Marine Air-Ground Task Force (MAGTF), the Marine Expeditionary Force, and the Special Purpose MAGTF. MCDP 3 is too generic to prescribe TTPs for the conduct of a

specific competency such as FOB operations. However, it defines USMC mentality and thus their conduct. It is the root of all expeditionary operations and applies directly to forward basing in austere locations.

MCDP 6, *Command and Control*. MCDP 6 contains generic philosophy and equipment principles used in conducting C2 of USMC forces. It does not directly address C2 at FOB. However, applying certain philosophies within MCDP 6 to a joint FOB C2 team has value. Considering organization, technology, and chain of command, the USMC mentality is thus encapsulated: "The general aims of organization with regard to command and control should be to create unity of effort, reasonable spans of control, cohesive mission teams, and effective information distribution. Organization should not inhibit communications in any way but instead should facilitate the rapid distribution of information in all directions and should provide feedback channels" (MCDP 6 1996, 133-134).

MCWP 3-2, *Aviation Operations*. The first sentence in MCWP 3-2 can be considered the USMC mantra concerning their organic aviation assets: "Marine forces are general purpose forces and traditionally come "from the sea" with limited organic fire support and mobility assets. As such, Marine forces rely heavily on the fires, fire support and mobility provided by Marine aviation" (MCWP 3-2 2000, 1-1).

If the publication's first sentence is the USMC's fight song, then USMC General Carl Mundy's words provide the melody: "[Marine aviation units] are not merely joined at the top when the time comes to fight. They are fully integrated from top to bottom, and they train that way full time" (MCWP 3-2 2000, 2-1).

MCWP 3-2 defines the entire USMC aviation function and control system. It focuses on internal doctrine and TTPs, yet dedicates an entire chapter to *Navy, Joint, and Multinational Operations* (MCWP 3-2 2000, 7-1). The joint paragraph within the chapter is careful to point out that USMC aviation assets remain under the operational control of the MAGTF commander. The MAGTF commander can release excess sorties to the tactical control of a JFACC if deemed prudent. Likewise, the USMC plans for all ground based forward aviation logistics and C2 elements to support its aviation (MCWP 3-2, 7-1 – 7-2). Therefore, USMC doctrine in the parent aviation war-fighting publication, MCWP 3-2, narrowly allows for joint participation in an air campaign. It does not consider joint FOB C2 operations.

MCWP 3-21.1, *Aviation Ground Support*. Like its parent publication MCWP 3-2, *Aviation Operation*, MCWP 3-21.1 provides doctrine and TTPs for traditional single-service operations. It does provide a detailed classification system for FOBs and establishes the need for USMC aviation and airfield support organizations to be capable of operating forward. It does not address joint FOB operations in any manner.

MCWP 3-25-8, *Marine Air Traffic Control Detachment Handbook*. MCWP 3-25-8 details the USMC air command and control system. Additionally, it provides several joint planning factors pertinent to FOB operations:

1. Ensure the interoperability of equipment and personnel
2. Ensure the common use and understanding of terminology
3. Allow responsiveness

4. Identify the proper liaison and staff/agency responsible between joint force components. Representatives from each component must enable and improve the information flow and provide expertise.

5. Outline procedures for airspace control

6. Facilitate transition from peacetime conditions to hostilities (MCWP 3-25-8 1997, 3-12)

Although not extensive, the TTPs within MCWP 3-25-8 recognize the importance of, "versatility, familiarity, and experience in joint/multinational air traffic control and airfield procedures to enhance aircrew safety and success" (MCWP 3-25-8 1997, 4-9). Furthermore, the publication suggests joint training is needed in order to overcome the challenge of integrating the USMC ATC systems within the joint arena. Joint training scenarios have been developed to accomplish this task (MCWP 3-25-8 1997, 5-4).

USMC Doctrine Summary

USMC doctrine recognizes the importance of a joint team but scarcely addresses the TTPs necessary to integrate their forces within one. A joint FOB C2 team can gain immensely, however, in borrowing the USMC expeditionary mind frame and accompanying TTPs.

USN Doctrine

USN doctrine concerning expeditionary aviation C2 is aircraft carrier centric and rarely touches upon land-based FOBs. Where USN doctrine does address the FOB predicament, it prescribes TTPs to engineering support assets for runway repair and

airfield structure (JATC, II-7 - II-9). Therefore, for the purposes of this thesis, USN doctrine shall not be considered.

Two Capable Joint FOB Organizations

Two organizations have historical experience in accomplishing at least partial joint FOB operations. The USAF Contingency Response Unit (CRU) (the USAFE CRG became a part of the USAF CRU program in 2000 after initiating its success) and the SOF STT are both organized to accomplish components of joint FOB C2 requirements. An analysis of both organizations provides insight to lessons learned and future models.

USAF Contingency Response Unit Concept of Operations

The CRU concept became reality during General John Jumper's tour as the USAFE Commander when the USAFE CRG was activated. General Jumper, now the USAF Chief of Staff, followed his USAFE command by becoming the Air Combat Command (ACC) Commander. Shortly thereafter, ACC was appointed the lead USAF major command for CRUs and General Jumper's staff wrote the USAF CRU concept of operations (CONOPS). The USAF CONOPS, though still in draft form, delineates the four existing CRU organizations:

The 86th CRG is the USAFE rapidly deployable force for initial contingency response. Stationed at Ramstein Airbase, Germany, the 86th is capable of responding to the full spectrum of operations in the EUCOM area of responsibility (AOR) (from humanitarian relief to level II combat operations).

1. The 613th Contingency Response Squadron (CRS) at Andersen AB, Guam is the Pacific Air Forces initial responding force for contingencies within the US Pacific Command's AOR. Like the 86th CRG, the 613th is capable of responding to the full spectrum of operations.

2. Air Mobility Command (AMC) Lead Mobility Wings provide initial response teams as CONUS-based CRUs for humanitarian assistance, disaster relief, or noncombatant evacuation operations. The five AMC Lead Mobility Wings (43 AW, 60 AMW, 22 ARW, 319 ARW, and 92 ARW) are Air Expeditionary Force aligned to provide a continuous capability for crisis response. At the request of a theater commander of USAF Forces through CJCS, they deploy to the site to establish a base for mobility-centric operations.

3. The 820th Security Forces Group (SFG) is the ACC CONUS-based CRU for force protection centric operations. When requested by a commander of Air Force forces through CJCS, the 820 SFG provides an initial force protection assessment of the proposed airhead and can provide significant follow-on security forces necessary to secure the airhead. The 820 SFG possesses additional capabilities in the functional areas of intelligence, communications, civil engineering, medical, and logistics, but this capability is limited and focuses on force protection issues. (CRU CONOPS 2000, 4)

The mission of the CRU is: "to rapidly deploy a 'first-on-the-scene' operational and support force capable of assessing and preparing a base for Expeditionary Aerospace Forces (EAF) deploying in response to any rapidly unfolding crisis in a CINCs AOR" (CRU CONOPS 2000, 5).

The CONOPS further defines the organizational structure of the CRU and explains the use of a tiered tasking system providing each CRU with competencies not within its immediate command. The three selectable tiers are: (1) forces not assigned but identified to deploy with the CRU, (2) forces that work on a recurring bases with the CRU, and (3) forces that will support the CRUs but do not work with them on a recurring basis (CRU CONOPS 2000, 5).

Although SOF, particularly STTs, are included in the CONOPS as a viable partner in FOB operations, there is no mention of combining to work with joint forces. The CONOPS suggests that the CRUs participate in joint force exercises and support

joint operations during contingencies, but the tiered system includes no joint partners nor is there a tasking method to rapidly coordinate for a joint partner.

Special Tactics Teams

> The special tactics mission is to provide the Joint Special Operations Air Component Commander with quick-reaction command and control positive air traffic management, and casualty recovery, treatment and evacuation staging during joint air and ground/maritime operations including short notice, sensitive contingencies. Special tactics teams operate in a ground role with joint or combined special operations task forces. (Special Operations Command Center for Plans, Operations, and Training 1998, 5-46)

The key to the STT mission statement as it pertains to this thesis is that STTs are designed to work in the SOF environment for a Joint Special Operations Air Component Commander. Although they routinely train with regular forces, their limited numbers and specialized capabilities may make them too valuable to task in regular joint FOB operations, especially as the STT is capable of more than FOB control.

STT mission tasks are divided into five categories:

1. Provide terminal guidance and air traffic control for assault zones (AZ). An AZ may be an established airfield, landing strip or unimproved site.
2. Select, evaluate, survey and establish AZs
3. Provide medical care, recovery and evacuation
4. Conduct, coordinate, and plan fire support operations
5. Conduct mobile training team operations (*Special Operations Forces Reference Manual* 1998, 5-47 - 5-48)

According to Major Brett Nelson, a former STT operations officer, the STT as an operating system is too small to use in a conventional force FOB C2 role in light of the four other mission tasks it can perform. Major Nelson indicates that during an air war, in

particular, fire support operations comprise a large portion of the STT's manpower and effort (Nelson 2001).

Joint FOB Organizations Summary

The USAF CRU is rapidly gaining legitimacy in the USAF community and has more than proved its worth in the field. Its strengths include the ability to rapidly mobilize as a complete team without having to devise ad hoc unions, which meet for the first time at a forward location. Its weakness is that it is too USAF-centric. The STT is a rapidly deployable and experienced joint FOB force. However, it is designed to operate under the SOF umbrella and may be considered inappropriate for a large-scale, conventional force, joint FOB operation. The structure of both organizations provides a foundation for a joint FOB C2 team. The lessons learned by each organization can be applied to future joint FOB operations.

Lessons Learned

By examining the after-action reports from various joint FOB operations, the thesis can correlate both need and structure for future operations.

Operation Shining Hope and Task Force Hawk Lessons Learned

The trials of combining joint and coalition partners at a single bare-based airfield in Albania in 1999 for the twofold purpose of providing humanitarian aid and a deep-strike aviation force provides ample lessons learned. This effort was, perhaps, the most all-encompassing joint FOB operation in recent history. TF Hawk converged on Rinas Airport one week after the lead elements of Operation Shining Hope. Neither force had

planned in detail with the other until they hit the ground. Rinas Airport was the definition of a bare-base facility. Besides a runway, several dilapidated taxiways, and an eager host nation, Rinas Airport could provide the USAF, USA, USN, and their coalition partners nothing.

The two primary planning agencies and subsequent C2 elements on the ground at Rinas Airport were the USAFE CRG and USAREUR V Corps TF headquarters (HQ). Both groups participated in publishing detailed reports on every aspect of their operations. The two primary reports considered for this thesis are: (1) *Case Study on the 86th CRG Rinas Airport, Tirana, Albania Deployment*, and (2) *The Task Force Hawk Combined Arms Assessment Team Initial Impressions Report*.

Case Study on the 86th CRG Rinas Airport, Tirana, Albania Deployment. As the USAFE CRG had been activated only four weeks prior to arriving at Rinas Airport, the mission became a validation of their procedures, force structure, training, and equipment (Bray 2001). The 86th CRG Commander, Colonel Bray, and his staff detailed lessons learned in an effort to improve their organization for their next mission. Their effort includes recommendations in numerous areas and relate not only to their joint partners, but also to the host nation, NGOs, and coalition partners.

The Task Force Hawk Combined Arms Assessment Team Initial Impressions Report. TF Hawk, possessing a troop strength of 5,000, was a significantly greater force than TF Shining Hope and, therefore, was staffed and resourced to a much greater extent. However, the cumbersome size of the force promulgated several challenges. Additionally, the TF's influence on the airfield situation was by proportion larger than all others players. Within the 296-page detailed report produced by the Center for Army

Lessons Learned, four chapters provide insight to the five criteria selected in this thesis for analysis.

Additional Support Operations and Stability Operations

In providing further detail on joint FOB operations, numerous lessons learned flow from operations at a level less than conventional warfare.

TF Eagle. TF Eagle was initiated to perform the 1995 transfer of authority from the United Nations protective force in Bosnia to the USA and was headquartered in and around the airfield at Tuzla. Both the TF and the airfield have been in existence in one form or another since 1995, providing numerous FOB lessons learned. However, the most-insightful lessons for the purpose of this thesis come from the initial setup and operations at the airfield. This thesis will study the joint operations at Tuzla Airbase using the Center for Army Lessons Learned document *Operation Joint Endeavor: Task Force Eagle Initial Operations*.

The most-pertinent lessons learned during the initial phase of TF Eagle concerning FOB operations include: (1) adverse weather planning; (2) sequencing of joint, coalition, and civilian organizations into the field for optimal airfield buildup; (3) the use of USA civil affairs teams to coordinate with the local leaders and population; and (4) the critical use of USA aviation assets in force protection, reconnaissance, and mobility roles (Center for Army Lessons Learned 1996, x, 5, 136-137).

Operation Fiery Vigil. The 1991 evacuation of the Philippines due to a volcanic eruption united the USMC, USN, and USAF to save 21,000 Americans and to provide humanitarian assistance to the indigenous people. A FOB was required at Subic Bay as

mainstream US-operated airfields were too near the volcano and thus rendered unusable. The primary source for this operation is the Center for Naval Analysis's *Requirements for Humanitarian Assistance and Peace Operations: Insights from Seven Case Studies*.

Operation Atlas Response. After the severe flooding in Mozambique in 2000, EUCOM, combining USAF, USA, and SF teams, provided initial rescue operations and humanitarian assistance. FOB operations were necessary to carry food and supplies forward to the flood-devastated areas of the country. Numerous articles from the EUCOM website document FOB operations. Additionally, the after-action review published by USAFE provides a detailed look into FOB operations.

Operation Assured Response. In April of 1996, fighting in Monrovia, Liberia, became so extreme, the US Ambassador was forced to call upon the US military to evacuate his staff and their supporters. The Special Operations Command Europe (SOCEUR) set up the airfield in Freetown, Sierra Leone, to conduct the noncombatant evacuation operation (NEO). Their airfield lessons learned are well documented. The primary source for this operation is the US Special Operation Command History and Research Office's report *Operation Assured Response: SOCEUR's NEO in Liberia April 1996*.

Summary

In addition to collating military doctrine for the purpose of illuminating a shortfall in the joint spectrum of military FOB operations, this thesis studies current organizations capable of performing joint FOB operations in part. Furthermore, by examining the lessons learned of several joint operations (specifically, information pertaining to FOB C2), this thesis may discover a single or multiple solutions.

CHAPTER 3

METHODOLOGY

Introduction

At the conclusion of Operation Assured Response (the 1996 NEO in Liberia), Colonel Bernard H. Fullenkamp, a conventional USAF officer and the director of mobility forces assigned to the TF, commented on the overall performance of the SOCEUR-led JTF: "I cannot overstate how joint and how together the SOCEUR forces were; it was obvious SOCEUR had done this as a collective team often before" (Partin and Rhoden 1997, 49).

The JTF evacuated 2,126 people representing seventy-six countries out of Liberia. The mission occurred in the face of a brutal struggle for power within the country's capital. Critical to the success of the operation was the speed at which the forces were able to deploy and then to employ a complete rescue package (Partin and Rhoden 1997, 3). The mission central nerve and backbone resided in Freetown, Sierra Leone. SOCEUR set up both the JTF HQ and an intermediate staging base (ISB) at the Freetown airport, under austere conditions. SOF personnel responsible for airfield execution worked as a well-integrated team. Furthermore, they smoothly included conventional forces into their action. Using the Freetown airport and FOB operations from other contingencies as an example, this chapter will set forth the methodology used within the thesis to determine whether joint FOB C2 procedures and current organizations are adequate. If procedures and organizations are found lacking, the methodology will generate recommendations to the existing doctrine and organizational structure within the DoD.

Doctrine Adequacy

Joint doctrine does not directly address or establish TTPs for joint FOB operations. Joint doctrine is, however, directive in the planning and execution of joint teams in general. Therefore, the principles within joint publications should guide any joint FOB C2 team. Furthermore, as joint doctrine and TTPs should address the integration of joint air assets as they are employed across the multispectrum of military operations, DoD should fulfill the creation of TTPs integrating service organizations during joint FOB operations.

USAF doctrine describes how FOBs fit into the hierarchical JFACC system as well as the US Transportation Command's (TRANSCOM) scheme of worldwide support. However, USAF doctrine focuses on its service agencies and provides little detail on integrating with joint partners. It simply stipulates how joint players should coordinate to use USAF mobility assets.

USA doctrine provides explicit direction for aviation C2, base support, and operations. However, it provides little detail for joint support operations at an FOB. Furthermore, USA doctrine does not encourage USA aviation to work under a JTF as a maneuver force apart from the USA's ground combat forces.

USMC doctrine, like its sister services, scarcely addresses the TTPs necessary to integrate forces into a joint team. However, a joint FOB C2 team can gain immensely in borrowing the USMC expeditionary mind frame and accompanying TTPs.

USN doctrine does not address land-based expeditionary operations in the C2 realm.

Existing joint or service doctrine does not sufficiently cover TTPs for joint FOB C2 operations. Without a baseline for these operations, units waste precious time planning for and agreeing upon working relationships once contingency planning or execution occurs. This process often compromises mission integrity and cohesion. If doctrine and TTPs existed, planning and execution would be streamlined allowing more time for other critical tasks. Mission execution would become more effective.

Narrowing the Focus

In order to provide the necessary focus, this thesis concentrates on the C2 required at joint FOBs employing either or both conventional and Special Forces.

Items for Further Study. There are numerous additional competencies required to establish air operations at a forward location, particularly if there is a threat to the base. However, those items can only be listed for further study within the confines of this analysis:

1. Airbase defense
2. Public affairs
3. Civil affairs
4. Psychological operations
5. Medical
6. Logistics and support (including aircraft maintenance)
7. Engineer (specifically runway repair and airbase structure)
8. Civilian logistics

C2 Concentration

For the purpose of this thesis, FOB C2 is studied within five categories: (1) the ability to rapidly deploy forward and to immediately establish safe and effective operations, (2) the ability to safely perform joint ATC for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support.

Rapid Deployment Capability. According to Joint Publication 3-07, *Joint Doctrine for Military Operations Other Than War*: "US forces need to be able to respond rapidly either unilaterally or as a part of a multinational effort. . . . The ability of the United States to respond rapidly with appropriate MOOTW options to potential or actual crises contributes to regional stability" (1995, I-4).

USAFE established the CRG in February 1999 to provide a rapid and complete FOB capability in the European theater. The CRG consists of traditional mobility support squadron elements (aircraft C4, on-load and off-load of aircraft, maintenance, etc.) as well as a sophisticated security team capable of defending an airbase. They are organized for rapid deployment and have the capability, through a tiered relationship, to bring additional assets (air traffic control, public affairs, legal, medical, etc.) depending on the nature of the mission and the FOB.

Three weeks after their activation, the CRG became "the most forward deployed, isolated ground force in the entire Kosovo war" (Bray 2000, 4). Their first mission occurred while the unit was still at sixty-percent of their planned strength and after only

thirty-six hours of planning. They deployed to Albania for four days to insert a classified team in support of air strikes into Serbia. Thirty-six hours after arriving at home station from this mission and only fourteen hours after subsequent mission approval, the CRG's lead element again rode a C-130 transport aircraft from Germany to Rinas Airport, Tirana, Albania for what turned out to be a fifty-nine-day deployment. After two more C-130s joined the first, the initial package was in place--thirty airmen alone at a nearly deserted airfield (the eventual force strength of the CRG was 140 personnel) (Bray 2000, 2, 4, 15). The CRG's after-action case study details the requisite organization, training, planning, and logistics that allowed the CRG to react within hours to emerging crisis.

The CRG can plan, deploy, and execute rapidly because they are assigned or have habitual relationships with personnel and equipment structured to open and operate austere airfields. The CRG does not have to wait for or coordinate with other units to complete an airbase's mission essential requirements. The unit integrity of the CRG allows them to arrive first on scene, support themselves, and effectively execute. Joint Publication 3-07, *Joint Doctrine for Military Operations Other Than War*, states:

> When personnel and elements are drawn from various commands, effectiveness is decreased. By deploying without established operating procedures, an ad hoc force is less effective and takes more time to adjust to requirements of the mission. This not only complicates mission accomplishment, but may also have an impact on force protection. Even if political restraints on an operation dictate that a large force cannot be deployed intact, commanders should select smaller elements for deployment that have established internal structures and have trained and operated together. (1995, IV-1)

The ability to rapidly deploy to austere airfields and implement safe and efficient operations cannot be overemphasized. Unit integrity is the catalyst for rapid deployment capability and effective mission accomplishment.

ATC and Equipment. Upon arrival, the CRG became the ATC authority for not only Rinas Airport, but also the entire country of Albania. Tiered ATC personnel were deployed and attached to the CRG to accomplish this daunting task. The ATC accomplished 10,000 air movements by aircraft from over forty nations, including one of the largest airlift movements in history (500 C-17 loads) and up to 200 rotary-wing sorties per day, without a major accident (Bray 2000, 8, 11). Lessons within the case study on integrating rotary-wing and fixed-wing aircraft abound. Primarily, the CRG recommends the necessity of ATC personnel and equipment being organized under the command of the unit to further increase unit integrity (Bray 2000, 49).

Similarly, FOB operation during Operation Assured Response relied heavily upon ATC personnel running the airfield in place of HN controllers. Numerous types of both rotary-wing and fixed-wing aircraft along with 574 people deployed to the airport at Freetown, Sierra Leone, to be placed under the tactical command of a JTF. STTs ran both ATC and ramp control as the US force overwhelmed the Freetown controllers (Partin and Rhoden 1997, 17). The JTF set up a "bus schedule" of transport helicopters to and from the US Embassy in Liberia back to Freetown. Once evacuees arrived at Freetown, they were cross-loaded onto C-130s for transport to further destinations. A breakdown in airfield operations meant a slow down in the effort to evacuate people from a rapidly deteriorating situation at the Embassy (Partin and Rhoden 1997, 40-41).

The ability to effectively control the air traffic at an austere airfield is the most-critical aspect of FOB operations. Without effective ATC, the FOB becomes restricted to small, fair weather missions. Effective ATC includes both personnel and equipment.

Local C4. Soon after TF Hawk arrived on station, real estate at the airport was at a premium. As the CRG was first to arrive, they had the responsibility of initiating the base real estate plan. Furthermore, in order to provide base security and safety of movement on the busy airfield, control of the ground forces was imperative. Though the CRG made up less than 10 percent of the total force at Rinas Airport, they performed a lion's share of the ground tasks. In addition, they were appointed airbase command by the NATO TF commander due to their competency (Bray 2000, 21).

Second only to ATC, the ability to command and control airbase terrain and personnel is critical to FOB efficacy. Ramp space and the on-loading and off-loading of aircraft can limit the maximum number of aircraft on the ground, referred to as the *working maximum on ground*. If multiple agencies are attempting operations without coordination, the ramp can become saturated forcing inbound aircraft to hold or divert. Furthermore, as in the case of TF Hawk and Shining Hope, there can be a large amount of personnel and equipment needing immediate access to the airfield. Working space can be limited and considerations, such as transportation routes, communication nets, and security procedures, all need to be coordinated. The most-efficient way to establish order is for a single commander and staff to implement and enforce policy around the limited space that is an airfield.

Reach Back C4. During Exercise Unified Endeavor in 1996, the US Atlantic Command J-6, Colonel J. E. Downey commented: "With regard to communications, hope is not a plan" (JP 5-00.2 1999, X-5). All too often, however, poor communications planning results in poor communications. According to Major Tom Smith, member of the USAREUR DCSIM (G6) staff during TF Hawk, "The lack of prior planning and

piecemeal deployment of the separate service organizations that deployed to Rinas Airport resulted in an overabundance of hardware systems on the ground" (Smith 2001). Both the USAF and the USA TFs brought enough hardware to cover the entire operation. Typically, too much is not a problem; however, C4 systems require frequency management and the ability to be retransmitted and received on the opposite end of the sender--this is a joint task as the systems are shared within each theater. As there was insufficient planning in putting together TF Hawk, there was inadequate in transit and receiving end support given to the C4 structure at the FOB, resulting in too many systems trying to communicate through too narrow of a portal. Additionally, the ground team could have saved air transport and available terrain by properly integrating C4 systems during the planning phase (Smith 2001).

Major Smith further elucidates that a JCCC within the European Command's Joint Task Force (JTF) (should have operated under European Command's J6) did not plan or manage C4 at Rinas Airport resulting in each service component executing C4 plans without regard to each other (Smith 2001). In this case, doctrine exists to integrate separate service organizations into a cohesive team. However, Operation Shining Hope and TF Hawk hierarchical planners did not follow doctrine.

Major Smith's claims are verified in the *US General Accounting Office Report to Congressional Requestors: Kosovo Air Operations, Need to Maintain Alliance Cohesion Resulted in Doctrinal Departures*. About C4 frequency management, the report lists:

> *Issue*: A central spectrum manager needed to be assigned.
> *Resolution*: Issue is adequately addressed in joint doctrine. Lack of training was the probable cause for failure to follow doctrine, process, and procedures. (US General Accounting Office 2001, 27)

Host and Multination Coordination. During Operation Shining Hope and TF Hawk, coordinating with the host nation, coalition and joint partners, and NGOs became a daily task for the CRG commander in the form of an "emergency management group" meeting followed by a "military operations meeting." These meetings were held in the Albanian equivalent to the US White House and were often attended by the Albanian prime minister. The CRG commander became the informal leader of the military meeting during the first four weeks of the operation until a NATO staff was finally designated to take over the entire TF Shining Hope (a name not given until the NATO staff was in place). Subsequently, the TF J3 appointed the CRG commander to lead the Executive Airfield Management Committee, a combined governing body in charge of facilitating operations for all forces at the Rinas Airport (Bray 2000, 8). The importance of these functions is hard to quantify, but the CRG commander believes they were the cornerstones of the coalition's success. The fact that the CRG was leading the coalition for a critical four-week period speaks volumes about the importance of diplomacy for any FOB team commander.

Often, military planners focus on objective tasks, such as ATC, C4 systems, or airbase operating procedures. These responsibilities are concrete and can be accomplished through efficient management of resources and training of personnel. Subjective tasks are more difficult to plan, and therefore, are easier to overlook. Diplomacy in working with the host nation, coalition partners, NGOs, and even joint services can create the necessary conditions to complete a mission. Diplomacy does not come naturally or without effort. Commanders and their staffs must train and plan for diplomatic success. The USA and USMC have dedicated units that possess the expertise

to accomplish this type of coordination in the form of CA teams. Commanders should consider their expertise in an FOB mission.

Competing Resources

In reviewing existing organizations at least partially capable of performing joint FOB C2 operations, several stand out:

1. The SF STT
2. The USMC
3. The USA ATS and A/DACG
4. The USAF Contingency Response Unit (CRU)
5. The USAF TALCE
6. The USAF CSS

An obvious question when working within a limited budget is: Does the DoD need numerous organizations capable of performing the same task? Furthermore, does each service require its own FOB team? If the answer is yes to either or both questions, the next line of inquiry should focus on the interoperability of the single service teams or the possibility of placing air assets from one service under the control of another's C2 team while physically within the operating environment of the FOB. For example, if the USMC and USAF operate from the same airfield, can the USAF control airfield operations for either service, or should there be a joint party in control?

Major Brett Nelson, former operations officer of a ST Squadron, sees a distinction in both task and degree between SF and conventional units. According to Major Nelson, the STT provides an airman trained and experienced to be more capable of controlling in a higher threat situation without robust force protection. Major Nelson continues in

pointing out that the STT is qualified to participate in forced entry operations. However, once the FOB builds sufficient force protection and especially if the airfield operation grows, a STT is misused and ill capable of the more robust FOB C2. STTs are limited in personnel and equipment and not ideal for long term large-scale airfield operations (Nelson 2001).

Summary

Existing doctrine does not entirely cover FOB operations in a joint environment. Therefore, this thesis extrapolates the TTPs found within joint and service doctrine and adds the lessons learned from numerous contingencies involving joint FOB operations to produce recommendations. The methodology in reviewing FOB operations is first narrowed to provide the proper focus on C2. Then, the thesis expands the field of C2 to be judged within five categories. Finally, the thesis reviews several organizations capable of partial joint FOB C2 in order to evaluate the need for future changes in force structure or training.

CHAPTER 4

ANALYSIS

Introduction

> There are numerous roles and opportunities for the application of joint forces working together during FOB contingency missions; that application early during training and exercises would ultimately maximizing the effectiveness of each force, cut some duplication, and possibly save forces for each service. (Buckingham 2002)

Colonel (retired) Larry Buckingham, former director of security forces for USAFE and the first commander of the 820th Security Forces Group, is now a civilian contractor working at headquarters ACC. Colonel Buckingham has significant experience working with the integrated force protection and C2 elements of not only the 820th Security Forces Group, but as a deployed commander utilizing the capabilities of USAFE's 86th CRG. He relieved Colonel Bray as the commander of the 3rd Aerospace Expeditionary Group (the final evolution of the 86th CRG effort) at Tirana Airfield during TF Shining Hope. As a project officer on the ACC staff, Mr. Buckingham now works to develop the ACC CRU by transitioning the current 820th SFG structure, which is force protection centric, to the operationally centric CRG structure. This effort was started under then commander of ACC General Jumper and is continuing to progress under his direction as the USAF Chief of Staff.

In the spirit of Colonel Buckingham's statement, this thesis will show the analysis in two parts. First, this thesis will evaluate the consequence of lacking joint doctrine during joint contingency FOB missions. Second, having establishing the lack of joint doctrine, this thesis will examine five FOB C2 competencies and determine whether

separate service TTPs, personnel, and equipment are sufficient during joint operations. The five competencies are: (1) the ability to rapidly deploy forward and immediately establish safe and effective operations, (2) the ability to safely perform joint air traffic control (ATC) for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support. The thesis goal is to provide recommendations for changes in doctrine and present the advantages of transforming current single-service institutions into joint-capable FOB C2 organizations.

Joint Doctrine Deficiency

> The nature of modern warfare demands that we fight as a joint team. That concept is based on joint doctrine and its associated tactics, techniques, and procedures. It provides a common framework and approach to warfighting from which game plans can be developed--and successfully executed through the universal practice of joint doctrine. (*Joint Doctrine Capstone and Keystone Primer* 1997, inside cover)

Former Chairman of the Joint Chiefs of Staff General Shalikashvili's words reinforce the concept that in order to fight or practice as a joint team there must exist a "common framework" and "approach" from which that team can plan and execute. As General Shalikashvili points out, this framework should be joint doctrine and the associated TTPs. However, current joint FOB C2 doctrine and TTPs are either nonexistent or merely describe single-service capability. They are informational in nature, not directional. They may go so far as to recommend one service over the other in a certain operational phase or climate. However, they do not address a framework or approach for integrating two separate services at the same airfield. They provide no

standardization to allow two services to plan and practice a common mission using common TTPs. Therefore, when the need arises for two services to share a FOB, they must establish C2 procedures locally.

Often in joint doctrine, ambiguity is the mother of flexibility. However, a total lack of structure can hamper flexibility in the joint arena as individual service components remain mired in their unique experience rather than explore the effects of combining arms with their sister service. A joint framework, constructed by doctrine and TTPs, can streamline and integrate four interrelated and sometimes overlapping areas of C2 FOB operations: (1) manpower and equipment, (2) C2 interoperability in ground and air operations, (3) immediate efficiency, and (4) single-service and joint training and equipment acquisition. The joint doctrine framework can remain flexible enough to conform to a variety of missions and geographical areas while providing a basis for a joint FOB C2 team to train, plan, and acquire compatible equipment for future contingencies.

Consolidation of Manpower and Equipment. There are numerous limitations when operating from a FOB: physical space, supplies, ground lines of communication, air traffic corridors, and others. USMC doctrine suggests that during expeditionary operations: "supplies, equipment, and infrastructure are limited to operational necessities; amenities are strictly minimized" (MCDP 3 1998, 35). A primary reason for this limitation, particularly at FOBs, is the air transportation required to move personnel and equipment.

During the 1999 Tirana Airfield contingency, the DIRMOBFOR assigned airlift priority to TF Hawk over Operation Shining Hope. TF Hawk was a war-fighting

operation while Operation Shining Hope was a humanitarian mission. However, this blanket priority resulted in half empty aircraft arriving down range with TF Hawk ammunition for "day 20 of the war" while Operation Shining Hope awaited critical water and force protection barriers (Bray 2000, 24). The effects of this mismatch also continued during the redeployment of portions of TF Hawk forward into Kosovo and in working the drawdown of TF Shining Hope. There are separate problems with the airlift prioritization and loading systems; solutions to these problems are not within the context of this thesis. However, a change in doctrine and organization can directly overcome the root problem of moving personnel and equipment to a FOB for two separate missions. Had TF Hawk and Operation Shining Hope consolidated forces or jointly planned for FOB needs, such as communications equipment and force protection barriers, the system could have more easily maximized airlift while minimizing cargo and personnel.

This type of planning and consolidation does not occur with any real efficiency just prior to a contingency. Doctrine must direct force integration and provide TTPs during peacetime, so that services will plan for, practice, and evaluate deployment.

Streamlined C2 and Interoperability. The primary benefit of streamlined C2 and interoperability at a FOB is a safe working environment. The very nature of any FOB confines numerous personnel and fast-moving machinery around a single, vital resource--the runway. If personnel do not work within a standardized set of rules toward a single goal, safe and effective operations, the result is at least confusion and at most chaos.

Major Larry Ott, a USAF flight safety officer, deployed to Rinas Airfield several weeks after TF Hawk and Operation Shining Hope aircraft and ground personnel began operating from the field (a significant increase in aircraft arrivals and departures

necessitated his presence). His job as the airfield's flight safety officer was to evaluate the airfield's ground and air traffic safety conditions. Despite a brilliant overall safety record at mission's end, especially considering the number of aircraft movements under austere conditions, the airfield was not without faults that required significant coordination to overcome. Major Ott, in his trip report, illuminates several problems and some of their solutions:

1. The Army insists on using secure FM [frequency modulated] communications for their combat helicopters. This means that they speak to an Army controller in a different facility, who then relays information to the control tower via unsecure FM brick. This didn't work too well and we recommended that the Army move a controller into the tower with their secure radios. After a few days of technical difficulties, they were able to do this on 29 April [flights had been occurring at the field since the end of March], and communication and coordination have improved.

2. The AH-64 Apache helicopters were operating at night with no lights on and limited radio transmissions. There were several reports of Apaches crossing the runway to/from the FARP [forward air refueling point] without tower approval. A C-17 crew filed a HATR [hazardous air traffic report] on 26 April because they claimed to have come within 50 feet of a hovering Apache shortly after takeoff.

3. Personnel have been crossing the runway on foot and in vehicles without tower approval. Tower filed six USAF Hazard Reports from 21-26 April to highlight each separate incident they witnessed.

4. Army vehicles and equipment are encroaching upon the runway clear zone on the departure end of runway 18. This <u>still</u> is a hazard to all aircrews.

5. Congested taxiways and ramps and excessive driving speeds threaten aircraft and personnel. The Army damaged one of its Chinook helicopters ($85,000) when a vehicle backed into one of the main rotors. (1999, 1-2)

Major Ott's observations revealed a severe lack of TTPs shared between USAF and USA ground personnel and their respective aircrew. In most cases, considerable effort by the flight safety officers and the USA and USAF chain of command enabled the

problems to be resolved through locally developed TTPs, but only after safety infractions highlighted the necessity. Major Ott's report illustrates that the lack of preconceived TTPs degraded safety and efficiency and cost the local C2 structure considerable time and labor to resolve.

Immediate Efficiency. When Brigadier General Michael Canavan, then SOCEUR commander, began planning Operation Assured Response (the NEO of the American Embassy in Monrovia, Liberia), timelines for their courses of action ranged from 19 to 45 hours (Partin and Rhoden 1997, 5). As a result, the European commander in chief directed Brigadier General Canavan to proceed to a standby location and to be ready to conduct the NEO at the soonest possible time. The SOCEUR commander deployed his joint team to Freetown, Sierra Leone, which later became the ISB (although the SOF called it an ISB for helicopter traffic, it was an FOB for fixed-wing aircraft) for the NEO. One of the first problems encountered by the small force concerned forward airfield operations and force deployment. Several C-5 aircraft were flying to Freetown from two different locations carrying critical assets--helicopters were coming from Brindisi, Italy, while the personnel and equipment to offload, assemble, and maintain the helicopters were flying in from Mildenhall, England. Sequencing of the C-5 arrivals was important in light of the limited time before mission execution and the time it would take to reassemble the helicopters upon arrival in Freetown. As a result of previous deployment training and excellent communications, the C-5s arrived within five minutes of each other allowing the mission to move forward on schedule; admitting a bit of luck, a senior commander at the airfield later commented, "God was smiling on us that day" (Partin and Rhoden 1997, 13-14). In addition to critical assets arriving at the airfield on time, the

team faced ramshackle conditions at the Freetown airport. Every competency required to run the operation had to be imported, including ATC personnel and equipment. "All told, JTF personnel at the ISB (which totaled 574 people) had to manage flight safety, refueling, transfer of evacuees, medical care, supplies for the embassy (including food and water for the evacuees), and airfield operations" (Partin and Rhoden 1997, 17). In addition to the SOF team, both intratheater and intertheater airlift arrived at the Freetown airport to support evacuee onward movement.

At the operations conclusion, General Henry H. Shelton, then US Commander in Chief of Special Operations Command, commented, "The SOF demonstrated a remarkable 'synergy'--The right organization, the best equipment and, most important, the finest men and women ever fielded in special operations" (Partin and Rhoden 1997, 47). Brigadier General Cananvan expanded on General Shelton's comments by saying, "A lot of good folks in the SOCEUR joint community that constantly train and deploy together. They made it work. Without forward deployed SOF forces under one command who train together, we could not have done this mission in a timely manner" (Partin and Rhoden 1997, 48).

The results posted during Operation Assured Response--2,115 evacuees airlift to safety with a shot fired toward friendly forces--prove that a joint force that persistently trains together and possesses an expeditionary demeanor is capable of operational efficiency, and considerably more important, *immediate* operational efficiency (Partin and Rhoden 1997, 45). Some may argue that this is why the US pays to keep its SOF. So, why translate SOF training and operational practices to the conventional force? It seems obvious that the qualities that make the SOF quick *and* effective--joint training,

rapidly deployable equipment and an expeditionary posture, standardization among joint components, and others--are desirable and obtainable by all services.

The barriers to obtaining desired SOF attributes for the conventional forces, however, often stem from the fact that services compete against each other for funds and are limited in their training time--and must plan and coordinate both years in advance. In competing for funds, a single service does not want to admit to a shared competency or reliance upon an organization owned by its sister service. For example, if the USAF consistently trains and operates with USA ATS personnel and equipment at austere FOBs, it becomes difficult to justify USAF CCS personnel and equipment. In scheduling training events, services are faced with limited funding, a precedence to accomplish basic level skills over more advanced skills (joint operations and education are often considered in the more advanced category), and the newfound onus to provide troops with a more predictable deployment schedule (stemming from recent top-down efforts to increase force retention). It becomes difficult to change a training event that is scheduled and paid for years in advance, especially if it means synchronizing the long-term schedules of two separate service organizations.

Perhaps the simplest correction to this training deficiency is top-down direction to the services to train together in FOB operations. However, it is difficult to force a training relationship when there exists no TTPs--measurable standards of evaluation--to guide.

Peacetime Focus on Appropriate Training and Acquisition. From initial ATC training to sophisticated joint air exercises, FOB operations often sequester service aircraft and ground personnel at different airfields. When services choose to train at the

same airfield, such as USAF fixed-wing airlift supplying USA rotary-wing aviation at an FOB, C2 agencies normally separate the differing aircraft in time or space, a course of action that may not be feasible during contingency operations. Several real or perceived obstacles motivate this practice in training: air and ground traffic safety, lack of interoperability between ATC or navigation systems, ease of airflow, and ease of logistics. However, the bottom line remains that joint integration training at FOBs does not occur with any regularity.

USAREUR sponsors a joint training exercise called Victory Strike annually, which places rotary-wing and fixed-wing aircraft in the same operating locations for the purpose of airborne integration and control. However, since its inception, Victory Strike USA and USAF aircraft return to the ground at different airfields (they only plan to integrate separate service aircraft at the same FOB in the case of inclement weather or aircraft emergency). This employment separation occurs even though USAF transport aircraft are delivering necessary equipment to run the USA's rotary-wing FOB (the personnel and equipment are moved over ground lines of communication after arrival at the USAF designated FOB). (V Corps G3 2000, Annex 2) What makes this practice even more incomprehensible is that fact that the Victory Strike training exercises fall on heels of the Tirana Airfield contingencies, TF Hawk and Shining Hope. During these parallel missions, USA and USAF operated from one crowded FOB for over sixty days and learned numerous lessons, the least of which was that joint integration and interoperability are lacking (Bray 2000, 25).

Although the USA, USAF, USN, and USMC train to the same ATC standard (FAA directed), there remain three separate service initial training facilities: Fort Rucker,

Pensacola Naval Air Technical Training Center, and Keesler Technical Training Center. ATC personnel normally accomplish advanced training at local airfields in varying air traffic circumstances (Air Land Sea Application Center 1999, I-7, I-15, I-24). There is little cross flow in ATC training between services.

Similarly, the four services operate and procure ATC equipment under no set joint standard. The publication *Multiservice Procedures for Joint Air Traffic Control* admits, "integration and interoperability of ATC systems is highly complex and may require extensive research into equipment capabilities and support requirements" (Air Land Sea Application Center 1999, III-6).

Therefore, in the arena of ATC, the four services have no obligation to move along a single path towards integration and interoperability. Both the USMC and USAF admit that joint ATC training is important and recommend their ATC agencies engage in joint training exercises. However, they do so from the perspective that their own systems become familiar to other services and vice versa. There is no mention of merging systems and personnel to achieve a system familiar to all players.

Joint Doctrine Deficiency Summary

The lack of joint doctrine, including TTPs, has significant impact on FOB C2 operations. As each service conducts forward deployment and employment in joint environments, the lack of standardization hampers efficiency. What currently exists in the joint publications is informational at best and nonexistent in most cases. In order to overcome the joint doctrine shortfall, the following publications need to provide direction through TTPs, which this thesis will address in the final chapter:

1. JP 3-0, *Doctrine for Joint Operations*
2. JP 3-10, *Joint Doctrine for Rear Area Operations*
3. JP 3-17, *Joint Tactics Techniques, and Procedures for Theater Airlift Operations*
4. JP 3-52, *Doctrine for Joint Airspace Control in a Combat Zone*
5. JP 3-56.1, *Command and Control for Joint Air Operations*
6. JP 4-01.1, *Joint Tactics, Techniques, and Procedures for Airlift Support to Joint Operations*
7. JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control*
8. JP 4-01.4, *Joint Tactics, Techniques, and Procedures for Joint Theater Distribution*
9. JP 4-01.8, *Joint Tactics, Techniques, and Procedures for Reception, Staging, Onward Movement, and Integration*
10. JP 5-00.2, Joint *Task Force Planning Guidance and Procedures*
11. JP 6-02, *Joint Doctrine for Employment of Operational/Tactical Command, Control, Communications, and Computer Systems*
12. JATC, *Multiservice Procedures for Joint Air Traffic Control*

Joint FOB C2 Competency of Existing Service Organizations

This thesis will analyze five FOB C2 competencies and determine whether separate service TTPs, personnel, and equipment are sufficient during joint operations. The five competencies are: (1) the ability to rapidly deploy forward and immediately establish safe and effective operations, (2) the ability to safely perform joint air traffic control (ATC) for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the

ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support.

Rapid Deployment Capability. There are several single service FOB C2 teams capable of rapid deployment. The USMC, with its expeditionary disposition, prides itself on the global mobility and forward presence of its air and ground forces, to include self-supporting FOB C2 personnel and equipment. The SOF possesses both STTs and the transport aircraft capable of rapidly inserting them into austere or hostile locations worldwide. The USAF has recently developed the CRU to establish FOBs anywhere in the world rapidly under modest threat conditions. The question becomes, however, Is any one of these service organizations capable of completely supporting sister service forces at a FOB? Do they possess jointly trained FOB C2 personnel? Is their equipment compatible with the C4, ATC, and navigational equipment of that sister-service? Have they practiced joint integration using set standards applicable at any location?

While positive answers appear in some circumstances, it has been established within this thesis that joint doctrine and TTPs do not exist allowing single-service organizations to conduct standardized FOB C2 training, planning, or rapid execution. For example, while the USMC is capable of supporting their forces at any FOB, they would need augmentation (in the form of at least a TALCE) to provide total C2 of a large USAF intertheater airlift contingent. Likewise, while the recently developed USAF CRU can rapidly deploy to establish FOB C2 operations under most threat conditions, they would need help from an airbase defense team from the USA or USMC in critical threat environments. Currently, planning, training, and executing FOB C2 operations must be coordinated between service components upon mission receipt (best case) or after arrival

at the airfield (worst case). Operations in the past, such as the initial stage of Operation Shining Hope and TF Hawk, assumed that this coordination was minimal and allowed C2 teams to operate independently until problems occurred. Lessons learned within this thesis, however, prove that forces that routinely train together with a set of standards, such as the SOCEUR force that conducted NEO in Liberia, achieve greater success in time constraint environments than those that do not.

Therefore, regardless of any service organization's capability to deploy rapidly, FOB C2 operations cannot commence until time is spent coordinating the joint elements. In most cases, this will hinder deployment of forces to the field. Without joint planning, it is probable that each service will attempt to provide 100 percent of their required support causing excess capability to converge on a small geographic area. Furthermore, as each service attempts to flow their package to the airfield, limited airlift assets may force the determining authority (normally, either TRANSCOM's J4 cell or the theater's J4 cell) to prioritize the flow. One can imagine the decreased deployment time if joint FOB C2 packages were previously coordinated as directed by doctrine or at least preplanned.

In addition to saving time lifting forces and equipment to the FOB, C2 teams can save time upon arrival if ground and air operations between their forces are previously established. This applies to many facets of FOB employment. ATC personnel, aircraft on-load and off-load teams, air base defenders, communications specialists, and even aircrew from each service will be able to accomplish their respective tasks more rapidly if joint doctrine or at least a planning effort establishes TTPs prior to arrival at the field.

This thesis does not assess any service organization's rapid deployment and follow on employment capability. However, standardization through doctrine and training allowing consolidation of personnel and equipment with allow a joint FOB C2 team to more rapidly deploy to and then employ from any forward location.

ATC and Equipment. Although each service trains to the same basic ATC FAA standard, their advanced skills evolve consistent with the airframes they routinely control during peacetime and contingency operations (Air Land Sea Application Center 1999, I-1). For example, USA ATS personnel are educated and experienced in dealing with the full spectrum of terminal rotary-wing operations. However, USA ATS can provide only limited terminal fixed-wing service (Air Land Sea Application Center 1999, I-2). Likewise, SOF STTs are the only ATC team capable of providing both air droppable personnel and ATC landing systems. However, doctrine dictates that once an airfield is established and operations become robust, the STT should be replaced by a more capable ATC force (STT controllers provide only limited all-weather service). Furthermore, the air droppable ATC landing system used by STTs is the Mobile Microwave Landing System--not all USAF aircraft and no joint aircraft can use this all-weather system (Air Land Sea Application Center 1999, III-2). Therefore, even though standardization is somewhat forced through civil authorities (the FAA), service components grow apart in their training and equipment procurement to satisfy perceived unique needs.

FOB ATC requirements, however, are very similar for each service--each service airframe requires the ability to safely and expediently launch and recover to an airfield in all-weather and lighting conditions. In order to do this, certain facilities must exist. First, navigational and communications equipment must be compatible. Second, ATC

procedures and terminology must be standard. Third, airfield lighting standards must accommodate all forms of naked eye and night vision device flying. Finally, airfield construction and clear zones (airspace around the airfield where any ground obstacle may infringe on the flight path of an arriving or departing aircraft) must oblige each type of aircraft (this becomes a function of ATC when men and machinery working in the runway area are allowed to infringe on the clear zone).

Currently, ATC interoperability is a recognized problem in joint doctrine--a problem possessing little better than a makeshift solution. "Current combat ATC systems are designed with service specific requirements and are not specifically set up to interoperate with other services. In addition, direct links and procedures do not exist to connect tactical air control systems with USAF tactical ATC systems. Finally, due to distinct differences between aircraft performance and procedures, planners should request controllers experienced/current with anticipated traffic" (JATC 1999, III-7). As the doctrine states, the current solution at a joint FOB equates to mixing experienced personnel and their associated equipment in order to accommodate each service's aircraft. Rather than an effort to standardize the services training and equipment, doctrine only utters the workaround--a concoction of individuals that have not worked together until they meet at the field.

Granted, integrating different airframes in constricted airspace is challenging leading some to think safety precludes its practice. A 1994 traffic-pattern midair collision between a USAF F-16 and C-130 at Pope Air Force Base, North Carolina, that killed twenty-three soldiers on the ramp embodies the tribulation of controlling dissimilar aircraft traveling at different airspeeds and performing different types of approaches to

the runway. The F-16 struck the C-130 on the tail with its nosecone while only one quarter of a mile from the runway. The first finding in the subsequent accident report states, "The tower controllers had inadequate written guidance, little training, and no experience" in controlling the type of approach that the F-16 was performing" (United States Air Force Safety Investigation Board 1994, 1). However, the answer to deficient ATC training or experience is not always a blind separation of potentially difficult airframe mixtures. In peacetime and especially within the US, airfields are numerous making separation easy. However, overseas during a contingency, as Operation Shining Hope and TF Hawk illustrated, airfields can be limited forcing dissimilar airframes to use the same location. It, therefore, behooves US forces to train for all eventualities.

Local C4. In the words of General William T. Sherman, "A bulky staff implies a division of responsibility, slowness of action and indecision, whereas a small staff implies activity and concentration of purpose" (MCDP 6 1996, 135). Without too much of a leap, one can extrapolate General Sherman's critique of bulky staffs and apply it to two staffs accomplishing the same task at the same location--a contingency FOB. Imagine a scenario where the busy FOB comes under attack from an enemy air threat. Warning time may be limited to a few minutes forcing the immediate harmonization of many elements at the FOB to insure the best possible outcome. (Tuzla Airbase, Bosnia, was only minutes away when enemy fighters launched from a Serbian military airfield protecting Beograd during Operation Allied Force.) An alarm system must warn all personnel. Aircrew in all phases of operation (arriving, departing, taxing, starting engines, etc.) must know immediately what to do with their aircraft (shut down and evacuate to a bunker or launch immediately). Airbase defense must receive targeting

information. Ground personnel (maintenance, supply, C2, medical, etc.) must know their role. The FOB C2 team must establish post attack reporting procedures to assess damage for continued operations. Two separate service C2 teams operating independently during this crisis could spell disaster. A single commander and staff, charged with the total operation of the airfield, cannot only provide direction and leadership in crises, but also solve the daily nuances of ground traffic flow, billeting locations, health standards, public affairs, and host-nation coordination.

Current doctrine allows the transfer of operational control of service ground forces to a joint force land component commander (JFLCC) and the transfer of service air forces to a JFACC. It is, therefore, feasible to transfer a ground force in support of an air force to joint force commander in charge at a specific location--the FOB. In this way, independent service support agencies can remain focused on their specific airframe competency while reporting to a local command structure. The C2 team, in turn, can more easily assess where excess and shortages exist and direct the precise synchronization of all forces when necessary.

Reach Back C4. Chapter 2 of this thesis points out that joint doctrine defines theater C4 planning and execution. JP 6-02, *Joint Doctrine for Employment of Operational/Tactical Command, Control, Communications, and Computer Systems,* details the agencies held responsible for organizing C4 at every location within the theater, to include FOBs (all though FOBs are not specifically mentioned). However, as chapter 3 of this thesis elucidates, not every theater follows the doctrine down to the levels occupied by joint FOB operations. Operation Shining Hope and TF Hawk exemplified a lack of planning and direction from the higher joint agency. This resulted

in an overabundance of C4 equipment arriving and occupying space at Tirana Airfield, Albania. One cannot wholly blame the EUCOM J6, however, for the oversight. Until joint doctrine recommends joint FOBs C2, prior planning and integration will often not occur.

Host and Multination Coordination. Master Sergeant Bart Decker, an eighteen-year combat control (USAF STT) veteran, was one of the first to arrive at the Uzbekistan FOB to support America's war on terrorism. Finding incompatible ATC and navigation systems and lacking runway lighting, Master Sergeant Decker's team worked with the Uzbekistani forces to restructure the airfield's systems, allowing USAF C-17s to carry in the remaining US force. Daily operations followed, combining the talents of host-nation controllers and Master Sergeant Decker's combat controllers. Of the host-nation integration, Decker said, "We had interpreters who helped with the language barriers, but after a few days of working in the tower together we developed a good rapport with our host nation controllers. One of the host nation controllers even brought in a chess board and we all started playing chess during any quiet times" (Schreitmueller 2002, 2).

Master Sergeant Decker's assessment, though outwardly benign, shows his team's entrenched understanding of the importance of a good relationship with a host nation. In order to establish such a relationship three things must occur before a joint force deploys to an airfield: (1) the joint team must prepared to present a unified purpose, (2) the joint team must trains its personnel to understand their future political and cultural circumstances, and (3) the joint team must be augmented with host-nation expertise when needed.

If the USAF negotiates airfield usage in a certain country, it is reasonable to assume that the negotiators of that nation would not expect to receive an airfield request for the same field from the USA. Yet, with separate training schedules and agendas, this has occurred in the European Command AOR. In 2001, the Polish Ministry of Defense, through the US defense attaché's office, admonished USAREUR and USAFE planners for a lack of unity presenting US needs during the joint exercise, Victory Strike (V Corps G3 2000, 9). This common sense strategy has a better chance of realization if joint doctrine dictated the use of joint FOB C2 teams or at least a planning process for joint FOB use.

The probable criticality of future FOB exploitation lends itself to a policy of practiced diplomacy. If a nation tentatively lends the US an airfield that is critical to the prosecution of an operation, the US should make every effort to insure that country is incessantly content with its decision. This delicate diplomacy requires expert attention. The US employs forces in the form of USA and USMC CA personnel who have training and experience in host-nation coordination. During TF Eagle, commanders used CA teams to insure local government cooperated with US ground forces in and around the airfield in Tuzla (Center for Army Lessons Learned 1996, 137). Any future FOB operation should have a rehearsed working relationship with CA personnel.

Summary

The analysis of joint FOB C2 operations shows a lack of joint doctrine and TTPs. This deficiency perpetuates a lack of preplanned integration between service component organizations responsible for joint FOB C2 operations. Training, equipment

procurement, deployment schedules, and safe and efficient employment from the FOB are all adversely affected.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

> A joint committee leads to weak and faltering decisions--or rather indecisions. Why, you may take the most gallant sailor, the most intrepid airman, or the most audacious soldier, put them at a table together--what do you get? The sum of their fears. (Moeller 1994, 1)

Lest a casual historian presumes Winston Churchill's commentary to be a resolution--keep the services separated, it is rather a pessimistic criticism of the military frame of mind at the time. Unfortunately, it proves timeless in certain capacities through today. One can compare Churchill's British to today's US gallant sailor, intrepid airman, and audacious soldier as they sit around the congressional budgeting table competing for fiscal year funding. Fear of losing money to a competing service keeps one from admitting a surplus to another. Unfortunately, joint integration--reliance upon or cooperation with a sister-service capability--is often perceived (correctly or not) to highlight a surplus.

In an effort to increase joint effectiveness, the 1986 Goldwater-Nichols amendment to Title 10 of the US Code increased the authority of the Chairman of the Joint Chiefs of Staff (CJSC). One of the many integration tasks assigned to the CJCS is the necessity to: (1) develop doctrine for the joint employment of the armed forces, (2) formulate policies for the joint training of the armed forces, and (3) formulate policies for coordinating the military education and training of members of the armed forces (Legal Information Institute, Cornell Law School 2002, 153a5). Although examples of doctrine creating service integration exist in areas, such as theater missile defense and close air

support, joint doctrine is lacking where it concerns FOB C2 operations. This deficiency, coupled with a lack of higher direction, places FOB C2 and support forces into the conundrum described by Churchill. Individually, services plan to provide entirely for their own forces at forward locations. When the scope of logistics is beyond the reach of an individual service, such as the ability to manage intratheater airlift by the USA, they rely upon liaison individuals or teams who do not fall into the USA command structure at the airfield although they reside in the same small geographical space.

As history has shown, a service very rarely finds itself alone at FOBs due to the rarity of the commodity. The solution (and ultimate realization of the Goldwater-Nichols amendment's ideal) to the joint FOB C2 problem lies in sweeping changes to the structure of FOB C2 organizations, procurement of like systems, a training program structured to integrate forces, and the rewriting of joint doctrine to provide the TTPs necessary to allow planning, training, and execution.

Modifying and Integrating a Base Organization: The USAF CRU

This thesis recommends that the DoD use the four existing USAF CRUs as base organizations to create joint capable FOB C2 teams. The current concept, with the exception of being USAF-centric, of the CRU satisfies each service's need for FOB operations. The CRU maintains an expeditionary posture; future requirements for the unit include an airdrop competence. The CRU is self-supporting and has the inherent ability to perform most FOB C2 tasks. Specialties assigned to the CRU include security forces, aerial port, communications, civil engineering, Office of Special Investigation, aircraft maintenance, intelligence, medical, environmental health, vehicle operations, C2,

supply, airfield operations, finance, and contracting (Bray 2000, 1). The CRU can reach those competencies they do not possess through the ability to task a previously designated organization (called a "tiered structure organization"). Additionally, "tier one" and "tier two" category units train regularly with CRU forces, coming under the CRU chain of command once tasked to keep C2 integrity.

DoD should consider renaming the joint CRUs to severe ties with the single service (USAF) stigma and focus on the FOB mission. This thesis recommends the new designation: Joint Contingency Airfield Teams (JCAT).

Modifications to the current USAF CRU construct will enhance the JCAT capability. First, ATC personnel must no longer be a tiered asset but assigned to the JCAT. Within the USAF, this thesis recommends that ATC personnel and equipment for the JCAT transfer from the existing CCS program, which can then be scaled down or phased out--its necessity overcome by the existence of the JCATs. Second, the JCAT must have a staff, similar to the current joint numbered staff, and it should contain, in addition to the traditional J1 through J5 positions, a public affairs officer and a legal advisor. Third, assigned force structure--security force, logisticians, medical personnel, and others--assets shall be commensurate with the concept of operations for a particular JCAT (each JCAT may not need the same level). The JCATs can reach additional forces through the continued use of the tiered structure.

Becoming Joint

Up to this point, this thesis suggests nothing extraordinary. However, making the USAF CRU into a joint organization can revolutionize conventional force integration. In

order to accomplish the assimilation of sister service forces by USAF CRUs, this thesis recommends a phased approach.

Phase One: Assign Liaison Teams. The first phase assigns liaison elements from the USA and USMC to the current USAF CRUs for a period of one year in order to assess the level and method of future integration. The liaison elements should have at least one ATC expert from their respective service to help in the development of standardized joint ATC procedures (discussed later in this chapter). The size of each liaison teams should be commensurate with the assigned CRU's theater of operations. For example, the USA liaison team may be bigger than the USMC in the EUCOM theater and vice versa in the PACOM theater.

Furthermore and depending on need, each theater should consider expanding their CRU to be capable of operating from two separate locations simultaneously. USAFE is considering this expansion based on the recommendation and operational tempo of their current CRG, which typically covers only USAF deployments. In making the CRU a joint organization, missions will most likely increase to force a more robust capability.

Phase Two: EUCOM and PACOM CRUs become JCATs. The second phase, also one year in length, establishes the first two JCATs in EUCOM and PACOM. The unit shall move to the direct control of the unified command's joint staff, though appointed agents can still assume tactical control. For example, the USAFE Air Mobility Operations Control Center, which tasks all EUCOM J4 approved airlift missions, can still task and control the CRU.

Services shall contribute personnel based on the assessment from phase one and proportional to their anticipated need of the JCAT's service. Some specialties within the

JCAT might naturally have a preponderance of personnel from one service--such as the USA providing a large number of air base security forces. However, there should be representative members of each service in every specialty. In particular, ATC and communications personnel must possess the full spectrum of service experience.

Phase Three: Full JCAT Implementation. The third phase completes the integration by converting the last two USAF CRUs into joint organizations, as well as, creating at least one JCAT in both the USA and USMC. The USA and USMC shall determine the best method and location for generating the future JCAT. In the end, there will be at least six JCATs, each capable of deploying to two different locations at the same time. PACOM (currently one CRU falls under the auspices of the Pacific Air Forces), EUCOM (currently one CRU falls under the auspices of USAFE), Joint Force Commands (currently one CRU falls under the auspices of ACC), TRANSCOM (currently one CRU falls under the auspices of Air Mobility Command), Central Command, and Southern Command shall each control one. As Southern and Central Command do not traditionally possess large force structures but rather employ rotational units from Joint Forces Command, the two remaining JCATS (USA and USMC) may more appropriately fall under Joint Forces Command using a base organization such as the 101st Air Assault Division. This force structure insures each regional unified combatant command has access to a JCAT. Additionally, it allows TRANSCOM to deploy their JCAT in support of their intratheater airlift force. This thesis recommends that the authority to prioritize for each JCAT reside at the joint commander and staff (J3 or J4) level in order to insure equity among the services. A unified commander may pass tactical or operational control of the CRU if necessary.

Assigning Operational Forces to a Unified Command

As most operational forces within a unified command are assigned to the subordinate component commander, it is necessary to show a precedent for the JCAT concept--assigning operational forces directly to a unified commander. One such precedent is the Joint Communications Support Element (JCSE), headquartered at MacDill Air Force Base. The JCSE is subordinate to the US Joint Forces Command. Since its inception in 1961, the JCSE has been subordinate to several unified commands and, from 1972 to 1987, it was under the operational control of the Joint Chiefs of Staff. (United States Joint Forces Command Webpage 2002) The JCAT could be similarly assigned to the six proposed unified commands.

Funding

This thesis cannot either overlook or solve the issues of funding a joint unit. In all probability and initially, the USAF will assume the majority of the burden under the aforementioned phased approach as they have already established funding for what will become the backbone of the phase one and two units. However, it is critical that the remaining services provide resources, beyond personnel, commensurate to their expected use of the new capability. In order to keep standardization between each JCAT, hierarchical funding decisions may need to occur at the joint staff level after obtaining inputs from the unified commands. This may require the DoD to establish a separate joint funding program at a level above individual services so that the separate components neither squabble over nor ignore the funding of the program. Additionally,

the ability to procure future standardized navigation and communications systems may necessitate joint funds.

In the realm of resources, there exists one theoretical benefit of the JCAT program. As the unit proves its capability to provide forward joint airfield competency--what it took several individual service units to accomplish, each having to maintain the ability to deploy--the drawdown of separate service elements will save each service and thus the US military money. Standardized and streamlined capability should cost less.

JCAT Summary

In creating the JCAT, built around the USAF CRU, the DoD overcomes the challenges of joint FOB operations. The JCAT will be capable of accomplishing the five competencies put forth within this thesis: (1) the ability to rapidly deploy forward and immediately establish safe and effective operations, (2) the ability to safely perform joint air traffic control (ATC) for fixed-wing and rotary-wing multinational aircraft performing both combat and support missions, (3) the ability to provide C4 for local airfield assets, (4) the ability to provide and coordinate reach back C2 to hierarchical organizations, and (5) the ability to coordinate host and multination permissions and support.

Conventional and SOF Capability: Do We Need Both?

This thesis supports the continued existence of SOF and conventional FOB C2 competencies. The SOF STT is partially capable of airfield control under Spartan conditions, but as doctrine prescribes, they should support SOF air forces or conventional forces in more austere high threat situations, such as forced entry operations. The STT has other roles in the airspace control environment, and therefore, is vulnerable to over

tasking during contingency operations. Once a conventional air force begins to use the FOB on a large-scale basis or if conditions dictate conventional force operations, the JCAT should relieve the STT. As there will often be a transition period between STT and JCAT at the FOB, training and integration between the two units are paramount.

Train Like We Fight

Regardless of the implementation of a joint FOB C2 organization recommended by this thesis, the US military must rehearse the way it will most likely fight during future contingencies. In facing the reality of limited contingency FOBs, this means training joint air forces and ground support units to deploy to and employ from the same operating base in all conditions. In order to accomplish this training, standardized equipment and procedures must exist. Further, services must be willing to coordinate training events, which may initially mean surrendering individual training goals in the effort to increase joint compatibility.

Interoperable FOB Systems

Perhaps the most important result of creating a JCAT will be the necessity to standardize airfield communications and navigational equipment and their associated procedures. It is simply absurd and wasteful that the four services operate distinct organizations responsible for validating arrival and departure procedures for military airfields, forcing aircrew to distrust any procedure but their own. Furthermore, the fact that one service procures an airfield navigational system useful only for its own aircraft (and yet, even a portion of those), shows how displaced from the intent of the Goldwater-Nichols amendment the individual services remain.

In landing an aircraft at any US military controlled airfield anywhere in the world, there should be one standard. One set of compatible navigational procedures, one familiar method of lighting the runway, one language common to all operators, and one scheme of communicating to ATC personnel should greet each crew as they return from wielding the power of their airframe. Today's enemy air defense systems make airpower employment a daunting task. Departing and returning to the airfield should not be the most dangerous portion of the mission due to the precarious control of those who claim to manage the air and ground space.

Rewriting Joint Doctrine to Standardize FOB C2 Operations

In order to overcome the FOB C2 joint doctrine shortfall, DoD should create a separate joint FOB publication (under the 3-0 series) detailing the JCAT's role and responsibilities. Barring the creation of a JCAT, this publication will serve to provide TTPs for integrating existing service organizations at a FOB. The new document must provide overriding guidance that there be one command structure at an airfield with the ability to control and coordinate all aspects air and surface movement, airbase defense, logistics, medical, public affairs, host-nation and multination coordination, and deploying and redeploying the FOB force. The JCAT JP may refer to other, more specific JPs to detail areas such as ATC, C4I, and air base defense. However, many of these JPs must change to incorporate the JCAT integrated and standardized mentality.

As this thesis concentrates on C2 at the FOB, its primary recommendation for a wholesale change comes under JATC, *Multiservice Procedures for Joint Air Traffic Control*. This JP must include actual TTPs for integrated ATC, not merely information

of individual service capability. In order to produce a JP, each JCAT, during phase one of their implementation, will recommend airfield navigational, lighting, and communications systems to become the joint standard. Furthermore, the collective JCAT will draft ATC procedures for joint FOB use and forward them to the doctrine division for inclusion into the JATC JP. Finally, as the JATC publication includes more than FOB TTPs, the document must provide overall TTPs for ATC to each service, eliminating the disparity between separate service standards.

The remaining JPs (3-0, 4-0, 5-0, and 6-0 series) addressed in chapter 2 of this thesis should change to reflect the existence of the JCAT and recommend its use when the possibility exists of joint FOB utilization by conventional forces. After developing and publishing TTPs in the JCAT JP, the doctrine center can then divide by topic and splice information into the relevant parent JPs. Furthermore, service publications will change to reflect the JCAT practice.

Summary

> We must continue to seek new, revolutionary, and imaginative ways to employ air and space power and continue to provide the United States with even more capability to pursue national and military objectives with the reduced risk and cost in casualties, resources, and commitment. (Air Force Doctrine Center 1997, 40)

The above statement, used by the USAF in their basic doctrine document to justify streamlined and technologically advanced organizations, comes from *Joint Vision 2010*. Until a single commander with an integrated staff leads the FOB mission, the risk and cost of casualties, resources, and commitment have the potential to be exponentially greater than the number of separate FOB commanders. Without integration through

TTPs, training, standardized equipment, and a joint mind set, US forces will achieve efficiency only by extremely hard work and cooperative leaders upon arrival at the field.

Imagine the US Olympic hockey team, speed skating team, and figure skating team forced to use the same ice rink to conduct practice. They all perform the same basic leg movement, using the same basic footgear, in the execution of their respective tasks. If each team attempts to use the ice without coordination with the other, there will be conflict--possibly violent. If they focus on their own respective tasks, two teams might arrive at the same time, having wasted one team's time. If one team arrives too soon after the completion of another's practice, locker rooms become crowded and the Zamboni will not have had the time to smooth the ice. The media, attempting to interview a figure skater, may interfere with the hockey teams practice. If, however, all teams fall under the control of an Olympic committee who schedules their practices, maintains their supplies and the ice, cleans their lockers, and coordinates the publicity, there may be a better chance at gold.

The lack of joint integration is an equation for delayed efficiency at best and disaster at worst. Historically, the result is somewhere between delayed efficiency and near disaster. The creation of a JCAT will insure immediate efficiency upon arrival at the FOB and continued success throughout the mission. Furthermore, the implementation of a successful joint conventional support force could have profound implication to the outlook of joint war fighting. The Goldwater-Nichols amendment would take an enormous step towards fulfillment.

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